添付資料

1. 調査団氏名、所属

2. 調査日程

3. 相手国関係者リスト

4. 討議議事録（M/D）

5. ソフトコンポーネント計画書

6. 参考資料/入手資料リスト

7. その他の資料

   1）社会条件調査概要

   2）電気探査結果

   3）試掘、水質結果

8.　討議議事録（M/D）2011 年 9 月 29 日

ケニア国 大バリンゴ県村落給水計画協力準備調査その2 調査団員名簿

No.	名前	担当	配属先
1	伊藤　富章	総括	独立行政法人国際協力機構 資金協力支援部 参事役
2	白木　秀太郎	計画管理	独立行政法人国際協力機構 地球環境部 水資源第二課
	村上　敏雄	給水計画	独立行政法人国際協力機構 ケニヤ事務所 広域企画調査員
3	山口　雅弘	業務主任/地下水開発	(株)建設技研インターナショナル 水資源部技師長
4	田中　一朗	物理探査 1/試掘調査 1/水理地質 1	OYO インターナショナル株式会社 技術部部長
3	伊関　真一	物理探査 2/試掘調査 2/水理地質 2	OYO インターナショナル株式会社 技術部マネージャー
4	君島　実	副主任/給水施設計画/維持管理計画 1	(株)建設技研インターナショナル 水資源部副技師長
5	礒野　淳一	施工・資機材調達計画/積算	(株)建設技研インターナショナル
5	望月　誠美	社会調査/維持管理計画 2	(株)国際開発アソシエイツ

調査の全体工程

No.	月日	曜日	伊藤　富章 総括 JICA	白木　秀太郎 計画管理 JICA	村上　敏雄 給水計画 JICA Kenya Office	山口　雅弘 業務主任/地下水開発	田中　一郎 物理探査1/ 試掘調査1/ 水理地質1	伊関　真一 物理探査2/ 試掘調査2/ 水理地質2	君島　実 副主任/ 給水施設計画/ 維持管理計画1	磯野　淳一 施工・資機材調達計画/ 積算	望月　誠美 社会調査/ 維持管理計画2
0	1月23日	日									
1	1月24日	月	NRT			NRT					
2	1月25日	火	NRB（団内打合せ）		（団内打合せ）	NRB(団内打合せ)					
3	1月26日	水	JICA事務所打合せ、水・灌漑省協議（ｲﾝｾﾌﾟｼｮﾝﾚﾎﾟｰﾄの協議、ﾌﾟﾛｼﾞｪｸﾄの背景、目的、内容の確認）、MM案協議				資料収集・解析				
4	1月27日	木	ナクル移動、RVWB協議(ICR説明、調査スケジュール）								
5	1月28日	金	大ﾊﾞﾘﾝｺﾞへ移動、現場視察								
6	1月29日	土									
7	1月30日	日	移動（団内打合せ）								
8	1月31日	月	MM協議				RVESB資料収集（水理地質、井戸等）、CP打合せ、解析＋水理地質踏査の開始				
9	2月1日	火	MM協議・署名								
10	2月2日	水	、報告 JICA ケニア事務所、大使館、GTZ協議								
11	2月3日	木	NRT	NRT		ﾘﾌﾄﾊﾞﾚｰ水ｻｰﾋﾞｽ委員会打合せ（全体スケジュール、 190->150絞込みの協議）＋現地踏査					
12	2月4日	金									
13	2月5日	土									
14	2月6日	日									
15	2月7日	月				社会調査、物理探査、試掘、環境（現地再委託契約）、打合せ					
16	2月8日	火									NRT
17	2月9日	水									NRB
18	2月10日	木				移動・打合せ（ﾘﾌﾄﾊﾞﾚｰ水ｻｰﾋﾞｽ）					資料収集、CP打合せ、社会調査準備（現地再委託業者と打合せ等）
19	2月11日	金				現地踏査： 対象村落、既存給水施設および給水施設の動力源に関する調査 既存ソーラーシステム、骨炭浄水システム調査	資料収集 水理地質調査 試掘位置決定 物理探査 掘さく候補地点決定				
20	2月12日	土									
21	2月13日	日									サイト状況調査 現地再委託調査の整理 社会調査レポートの確認、結果の整理 RVWB打合せ、ソフトコンポーネントへの要望調査、検討 環境社会配慮調査 環境社会の状況確認。環境社会配慮制度に基づく必要手続き、スケジュールの確認
22	2月14日	月									
23	2月15日	火									
24	2月16日	水									
25	2月17日	木									
26	2月18日	金									
27	2月19日	土									
28	2月20日	日									
29	2月21日	月				NRB	水理地質調査 継続 試掘管理 既存水源位置確認 既存水源水質確認 物理探査 地質解析 掘さく候補地点決定				
30	2月22日	火				NRT					
31	2月23日	水									
32	2月24日	木									
33	2月25日	金									
34	2月26日	土							NRT		
35	2月27日	日							NRB		
36	2月28日	月							JICA事務所打合 水灌漑省表敬		
37	3月1日	火							給水施設計画/維持管理計画に係る資料・情報の収集		
38	3月2日	水									
39	3月3日	木									
40	3月4日	金									
41	3月5日	土									
42	3月6日	日									
43	3月7日	月							サイト状況調査 （対象村落の絞込み） 電気探査位置確認 既存水源位置確認 既存水源水質確認 給水施設検討		
44	3月8日	火									NRB
45	3月9日	水									NRT
46	3月10日	木									
47	3月11日	金									
48	3月12日	土									
49	3月13日	日						NRT			
50	3月14日	月						NRB			
51	3月15日	火						水理地質調査 試掘管理 既存水源位置確認 既存水源水質確認 物理探査 地質解析 掘さく候補地点決定			
52	3月16日	水									
53	3月17日	木					NRB				
54	3月18日	金					NRT				
55	3月19日	土									
56	3月20日	日									
57	3月21日	月									
58	3月22日	火									
59	3月23日	水									
60	3月24日	木									
61	3月25日	金									
62	3月26日	土									
63	3月27日	日									
64	3月28日	月							サイト状況調査 給水人口の確認、既存給水施設および給水施設の動力源に関する調査。各動力源における運営・維持管理に関する調査。メンテナンス体制検討に関する調査。		
65	3月29日	火									
66	3月30日	水									
67	3月31日	木									
68	4月1日	金									
69	4月2日	土									
70	4月3日	日									
71	4月4日	月				NRT				NRT	
72	4月5日	火				NRB				NRB	
73	4月6日	水				物理探査、試掘調査の確認および報告書の受領 社会調査報告書の受領および調査結果のﾚﾋﾞｭｰ 全体結果の概要とりまとめ RVWBとの協議、水・灌漑省との協議 Irrigation				基本資料収集 積算に必要な情報 見積書の入手	
74	4月7日	木									
75	4月8日	金							NRB		
76	4月9日	土							NRT		
77	4月10日	日								機材関連調査・ 施設の運営維持管理のための過去の車両使用実績・ 機材調達の必要性、妥当性についての検討	
78	4月11日	月									
79	4月12日	火									
80	4月13日	水									
81	4月14日	木									
82	4月15日	金									
83	4月16日	土								施工計画調査 建設用地の確保及び取得手続きに関する調査。 現地工法に基づく調達、施工計画立案に関する調査	
84	4月17日	日									
85	4月18日	月									
86	4月19日	火									
87	4月20日	水									
88	4月21日	木				JICAケニア、大使館報告		報告		報告	
89	4月22日	金				NRB		NRB		NRB	
90	4月23日	土				NRT		NRT		NRT	

相手国関係者リスト

添付資料３

Name	Position	Tel and Cellular phone	E-mail
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Eng. Lawrence N. Simitu	Director Water Service, MWI	0722-744816	Isimitu@water.go.ke
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Elijah K. Maiyo	DWO Baringo North	0724-113280	
Nahaman Towett	DWO Baringo Central	0720-215110	
Philip Kirvi	DWO Marigat	0722-296464	
Revben Komen	DWO East Pokot	0722973840	
Henry Nyamweyg	DWO Baringo Central	0722977392	
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Name	Position	Tel and Cellular phone	E-mail
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Isaac Y. Komen	Head Teacher	0723-691924	Site 2
Daniel K. Keles	Teacher	0729-091194	Site 3
Samuel C. Cheboi	Rifered Chief	0725-859600	Site 5
James B. Kamuren	Area Chief	0728-304890	Site 5
Joseph O. Kimielict	The Chairman Water Protect Kasutiei Loc.	0720-249033	Site 5
Reuben Chebon	Lake Kamnorok	0720-388907	Site 6
Julius T. Tibino	Assistant Chief Muchukwd YUB Location	0726-658355	Site 1
Fred Chepluswo	Assistant Chief Chemjro	0710-727988	Site 152
James Kiptoo	HIT Lemuyek Prysch	0720-049127	Site 152
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Reuben K. Kedireng	Nursul officer	0729-931088	rkedireng@yahoo.com
Christine Chelangat K.	Head teacher	0727-559684	Site 159
Wilson Lokobwa	Chief	0725-248921	Site 24
Anderson C. Chelvgo	Chinicab officer yc.	0722-449799	Ander.chelvgo@yahoo.com Site 72
Peter Chelelgo	Assistant CH.EP	0724-113284	Site 78
Andrew Rnmiwya	Kimayel Chief	0725-310271	Site 74 Subikoriema
James K. Yator	Chief Sacho Sol	0723-663035	Site 117
Benson Kngetich	Belbon Chief	0721-932100	Site 123, 129
Willy T. Rutto	Assistant Chief Kaptere	0726-621119	Site 43
Esther Cheptumo	Head teacher	0725-554300	Site 42
Elud K. Chesire	Chief Talat	0727-255391	Site 136
Tobole S. Lokorio	Chief	0724-450191	Site 11, 12, 13, 14

Name	Position	Tel and Cellular phone	E-mail
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Wilson Kapuwang	A/Chief Pemwat	0720-213801	Site 135
Micah K. Chesire	A/Chief Kiwananocge	0722-908210	
Jonah Korir	Assistant chief Nyalil-Buch	0723-602564	Site 95
Chebii Kipsang	Assistant Chief	0723-494216	Site 130
Jonah Chebieron	Assistant Chief	0724-509942	Site 45
Symon Cheraste	Assistant Chief Keryo	0714-698833	
Joseph T. CiiemiTei	Chief Similo location	0723-098342	Site 29
Agnes J. Chepkgithwt	Assistant Chief	0725-726415	Ditto
Mark Rono	Head Teacher	0723-389352	Site 106
Mark Chebon	Kimaso Primary Headteacher	0710-619500	Site 107
David T. Komen	Head Teacher	0723-843487	Site 105
Wilson Chepsgrgon	Head Teacher	0723-671810	Site 102
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Justus Ohempakany	Head Teacher	0727-929692	Site 70
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Vishal Bhalla Drilling Spares Services	Director	0722-204761	dss@connect.co.ke

MINUTES OF DISCUSSIONS ON THE SECOND PREPARATORY SURVEY ON THE PROJECT FOR RURAL WATER SUPPLY IN LARGER BARINGO DISTRICT IN THE REPUBLIC OF KENYA

Based on the results of the First Preparatory Survey, the Government of Japan decided to conduct the Second Preparatory Survey on the Project for Rural Water Supply in Larger Baringo District (hereinafter referred to as "the Project") and entrusted the survey to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to Kenya the Second Preparatory Survey Team (hereinafter referred to as "the Team") headed by Tomiaki ITO, Senior Advisor to the Director General, Financing Facilitation and Procurement Supervision Department, JICA, and is scheduled to stay in the country from January 25th to April 22nd, 2011.

The Team held discussions with the officials concerned of the Government of Kenya and conducted a field survey in Larger Baringo District.

In the course of discussions and field survey, both parties confirmed the main items described on the attached sheets. The Team will proceed to further works and prepare the Preparatory Survey Report.

Nairobi, February 2nd, 2011

伊藤富寿

Mr. Tomiaki ITO
Leader
Second Preparatory Survey Team
Japan International Cooperation Agency

Eng. David Stower,CBS,OGW
Permanent Secretary
Ministry of Water and Irrigation
The Republic of Kenya

Eng. Japheth Mutai
Chief Executive Officer
Rift Valley Water Services Board
The Republic of Kenya

1. Objective of the Project

The objective of the project is to improve access to safe water in larger Baringo District in Kenya.

2. Project Area

The Project area is as shown in Annex-1.

3. Responsible and Implementing Agency

3-1. The Responsible Agency is the Ministry of Water and Irrigation (hereinafter referred to as "MoWI").

3-2. The Implementing Agency is the Rift Valley Water Services Board (hereinafter referred to as "RV-WSB").

3-3. The organization chart of the implementing agency is shown as Annex-2.

4. Japan's Grant Aid Scheme

4-1. The Kenyan side understood the Japan's Grant Aid Scheme explained by the Team as described in Annex-3.

4-2. The Kenyan side will take necessary measures as described in Annex-4 for smooth implementation of the Projects, as a condition for the Japan's Grant Aid to be implemented.

4-3. The Team will report to the Kenyan side if there are any other undertakings based on the result of this survey.

4-4. The Team explained that implementation of the Second Preparatory Survey is not a commitment of the approval of the Project.

5. Schedule of the Survey

5-1. The consultants will proceed to undertake further surveys in Kenya until 22nd April, 2011 for the field survey.

5-2. If the Project is found feasible as the result of the Second Preparatory Survey, JICA will prepare the draft report in English and dispatch a mission in order to explain its contents around September 2011.

5-3. In case that the contents of the draft report are accepted in principle by the Kenya side, JICA will complete the final report and send it to the Kenya side around November 2011.

6. Contents of the Project

After a series of discussions, both sides confirmed that the contents of the Project are as follows;

(1) Construction of Water Supply Facility

Construction of 100 boreholes with pumping system, storage facilities, short pipeline leading to communal water point(s) and cattle trough(s).

The Team explained that the components of the water supply facilities (the number of construction and the type of power sources) are subject to change depending on the results of the survey, and the Kenyan side understood it.

(2) Procurement of Equipment

Item	Description	Specifications	Quantity
1	Vehicle	4WD, Pickup, Double cabin	1 Set
2	Motorbikes	175cc	2 Set
3	Computer	Desktop	1 Set

(3) Soft component

Soft Component for operation and maintenance (O&M) of water supply facilities at District Water Office (DWO), community and Water Service Provider (WSP) level.

Finally, both sides confirmed that the appropriate contents of the Project will be examined in accordance with the further surveys and analysis in Japan, and the final contents will be decided by both sides during the explanation of draft final report around September 2011.

7. Other Relevant Issues

7-1. Unit Amount of Water Supply

Both sides agreed that unit amount of water supply in the Project will be uniformly set as 20 liters per capita per day to all target villages on the First Preparatory Survey. However, groundwater resources in the target area is limited. Therefore, both sides agreed that the unit amount of water supply will be examined during further surveys and will be based on the Kenyan water supply practice manual.

7-2. Redefinition of the Population covered by a water supply facility

According to the water service strategy of Kenya, a water supply facility is supposed to cover the population which lives within 2 km around it However, many people in candidate villages need to carry drinking water for long distances more than five kilometers according to the results of the First Preparatory Survey.

Therefore, both sides agreed that the population covered by a water supply facility will be

redefined for proper design after considering access condition to safe water in each target village through further surveys.

7-3. Selection of Target and Alternative Villages

The list of the candidate villages for the Project is shown as Annex-5.

The Kenyan side explained that 7 villages in Bartabwa division of Baringo north district will be deleted from the list because of overlapping with other donor, and the Team agreed with them.

Both sides agreed that the sites will be examined for selection in term of urgency, necessity and sustainability of water supply facilities based on the following criteria.

- hydro-geological conditions
- number of beneficiaries
- access condition to safe water
- accessibility to the site
- availability of commercial grid
- socioeconomic and environmental conditions
- capacity for operation and maintenance of the facilities
- willingness to pay for operation and maintenance of water supply facilities by the community
- overlap with other projects
- sanitation and hygiene conditions
- others if necessary

Target villages and alternative villages will finally be decided by both sides during the explanation of draft final report around September 2011.

7-4. Criteria for Successful Boreholes and Handling of Test Boreholes

(1) Criteria for Successful Boreholes

Both sides agreed that the criteria of successful borehole will be considered by water yield, water level and water quality. Water quality will be basically applied on the Kenyan water supply practice manual. And detailed criteria will be determined by the results of further surveys.

(2) Handling of Test Boreholes

The handling of test boreholes according to the respective items are as follows;

A) Water Yield

- If the borehole is completely dry, it will be regarded as unsuccessful and will be

backfilled.

- If the water yield is more than 330 liters per hour but less than certain value which will be determined through the further surveys, the borehole will be regarded as unsuccessful but will be kept without backfilling.

B) Water Quality

- If any quality parameter exceeds the Kenyan practice manual (permissible level) for drinking water, the borehole will be regarded as unsuccessful.
- In case the exceeded parameter is Iron or Manganese, the borehole is regarded as successful, depending on the level of concentration and the capacity for operation and maintenance of removal equipment.

C) Successful Borehole

- If the borehole meets the parameters for success determined by the survey, then it shall be regarded as successful and will be kept for equipping during the construction stage.

7-5. Possibility of Groundwater Development in Deep Wells

According to the results of the First Preparatory Survey, groundwater level is considerably deep in some areas. Hence, groundwater development is assumed to need increased cost for construction and maintenance. This issue needs to be carefully analyzed based on three criteria – technical viability, financial viability and sustainability.

The Kenyan side agreed that the implementation of the Project in these areas will be determined after consideration of the analysis.

7-6. Power Sources for Water Supply Facilities

Both sides agreed that the power sources for water supply facilities will be selected from solar power, commercial grid, hand pump, windmill and generator. The most suitable power sources will be determined by comparative analyses on the cost efficiency and sustainability of each.

7-7. O&M of Water Supply Facilities

Both sides reconfirmed that water supply facilities will belong to RV-WSB, who is also responsible for O&M. The Kenyan side promised to take timely necessary measures for O&M of the facilities after completion of the Project.

7-8. Undertakings by the Kenyan side

The Team requested to the Kenyan side to secure necessary counterpart budget and to abide by undertakings listed below for the smooth implementation of the survey and the Project, and in addition to the major understandings described in Annex-4.

(1) To provide the Team with available relevant data, information and materials necessary for the execution of the survey,

(2) To prepare answers to the Questionnaire presented by the Team,

(3) To assign necessary number of counterpart personnel (C/Ps) to the Team during their stay in Kenya to undertake the following roles:

- To make appointments and set up meetings with relevant authorities wherever the Team intends to visit,
- To attend and conduct the Team during the site survey and make the necessary arrangement to secure working rooms for the Team,
- To provide information on available accommodation for the Team during the survey,
- To advise the Team for their collection of data and information as much as possible,

(4) To secure any permissions for the Team to take photographs and to enter into private properties and restricted areas for proper execution of the survey,

(5) To allow the Team to bring back to Japan the necessary data, information, maps and materials related to the survey, in order to prepare the survey reports,

(6) To protect test boreholes which are to be used as production boreholes until the commencement of the construction,

(END)

Annex:

Annex-1 Project Site

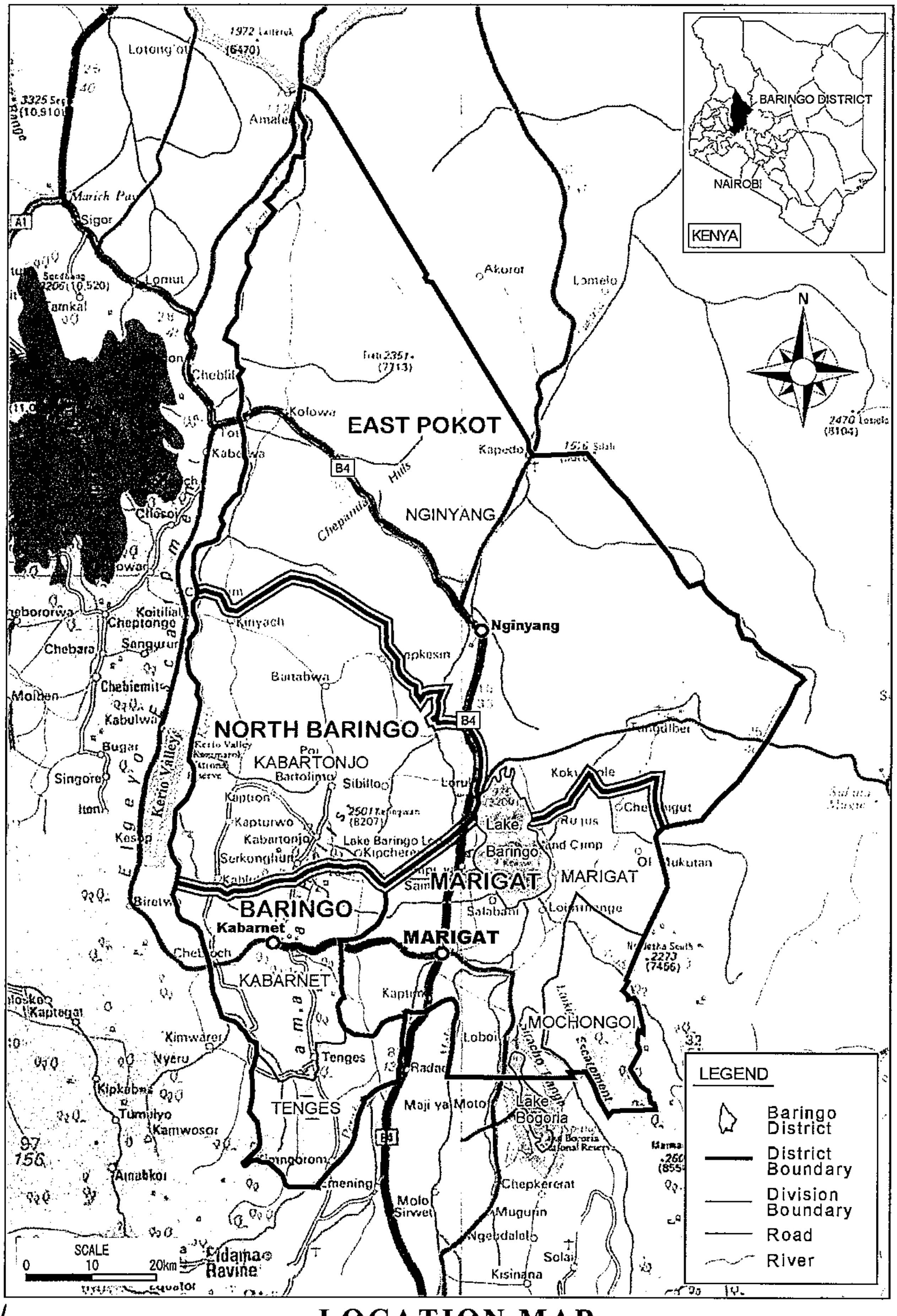
Annex-2 Organization Chart of the Implementation Agency

Annex-3 Japan's Grant Aid Scheme

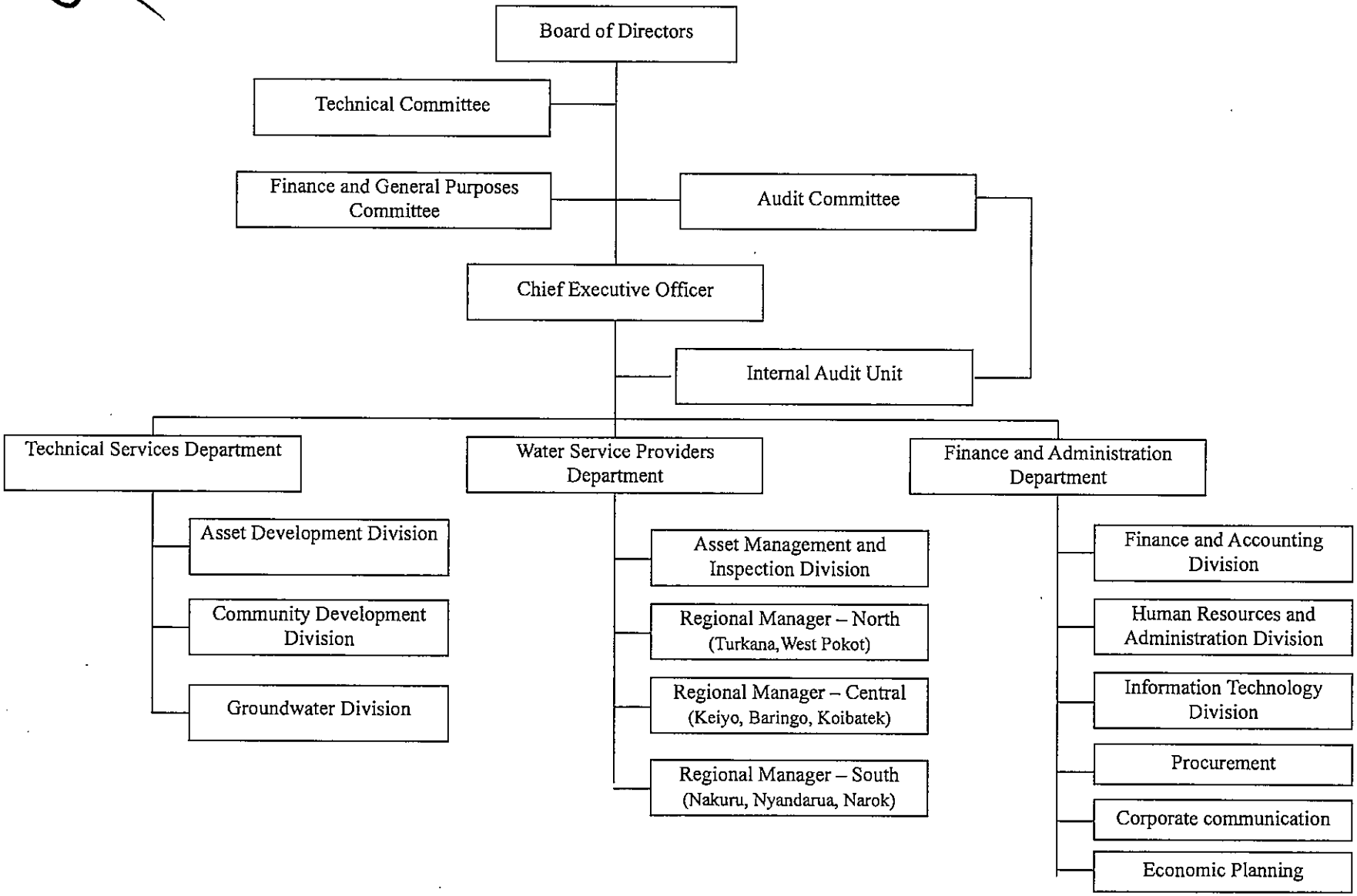
Annex-4 Major Undertakings to be taken by Each Government

Annex-5 List of Candidate Villages

Proposed Project Site



LOCATION MAP



Annex-2 Organization Chart of Rift Valley Water Services Board (RV-WSB)

Japan's Grant Aid Scheme

The Grant Aid Program provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. Grant Aid is not supplied through the donation of materials as such.

1. Grant Aid Procedure

1) Japan's Grant Aid Program is executed through the following procedures.

Application	(Request made by a recipient country)
Survey	(Outline Design Survey conducted by JICA)
Appraisal & Approval	(Appraisal by the Government of Japan and Approval by Cabinet)
Determination of Implementation	(The Notes exchanged between the Governments of Japan and the recipient country)

2) Firstly, the application or request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA to conduct a survey on the request. If necessary, JICA send a Preparatory Survey Team to the recipient country to confirm the contents of the request.

Secondly, JICA conducts the survey (Outline Design Survey), using Japanese consulting firms.

Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Programme, based on the Outline Design Survey report prepared by JICA, and the results are then submitted to the Cabinet for approval.

Fourthly, the project, once approved by the Cabinet, becomes official with the Exchange of Notes signed by the Governments of Japan and the recipient country.

Finally, for the implementation of the project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

2. Outline Design Survey

1) Contents of the Survey

The aim of the Outline Design Survey (hereinafter referred to as "the Survey"), conducted by JICA on a requested project (hereinafter referred to as "the Project"), is to provide a outline document necessary for the appraisal of the Project by the Government of Japan. The contents of the Survey are as follows:

a) confirmation of the background, objectives and benefits of the Project and also institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation;
b) evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from the technical, social and economic points of view;
c) confirmation of items agreed on by both parties concerning the outline concept of the Project;

d) preparation of a outline design of the Project; and
e) estimation of costs of the Project.

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid project. The Outline Design of the Project is confirmed considering the guidelines of Japan's Grant Aid Scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even through they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

2) Selection of Consultants
For the smooth implementation of the Survey, JICA uses a consulting firm selected through its own procedure (competitive proposal). The selected firm participates the Survey and prepares a report based upon the terms of reference set by JICA.

At the beginning of implementation after the Exchange of Notes, for the services of the Detailed Design and Construction Supervision of the Project, JICA recommends the same consulting firm which participated in the Survey to the recipient country, in order to maintain the technical consistency between the Outline Design and Detailed Design as well as to avoid any undue delay caused by the selection of a new consulting firm.

3. Japan's Grant Aid Scheme
1) Exchange of Notes (E/N)
Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the project, period of execution, conditions and amount of the Grant Aid, etc., are confirmed.

2) "The period of the Grant" means the one fiscal year which the Cabinet approves the project for. Within the fiscal year, all procedure such as exchanging of the Notes, concluding contracts with consulting firms and contractors and final payment to them must be completed.
However, in case of delays in delivery, installation or construction due to unforeseen factors such as weather, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

3) Under the Grant, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country.

However, the prime contractors, namely consulting, contracting and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

4) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. This "Verification" is deemed necessary to secure accountability of Japanese taxpayers.

5) Undertakings required to the Government of the recipient country

a) to secure a lot of land necessary for the construction of the Project and to clear the site;
b) to provide facilities for distribution of electricity, water supply and drainage and other incidental facilities outside the site;
c) to ensure prompt unloading and customs clearance at ports of disembarkation in the recipient country and internal transportation therein of the products purchased under the Grant Aid;
d) to exempt Japanese nationals from customs duties, internal taxes and fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contracts;
e) to accord Japanese nationals whose services may be required in connection with the supply of the products and services under the verified contracts such as facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work;
f) to ensure that the facilities constructed and products purchased under the Grant Aid be maintained and used properly and effectively for the Project; and
g) to bear all the expenses, other than those covered by the Grant Aid, necessary for the Project.

6) "Proper Use"

The recipient country is required to maintain and use the facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign the necessary staff for operation and maintenance of them as well as to bear all the expenses other than those covered by the Grant Aid.

7) "Re-export"

The products purchased under the Grant Aid shall not be re-exported from the recipient country.

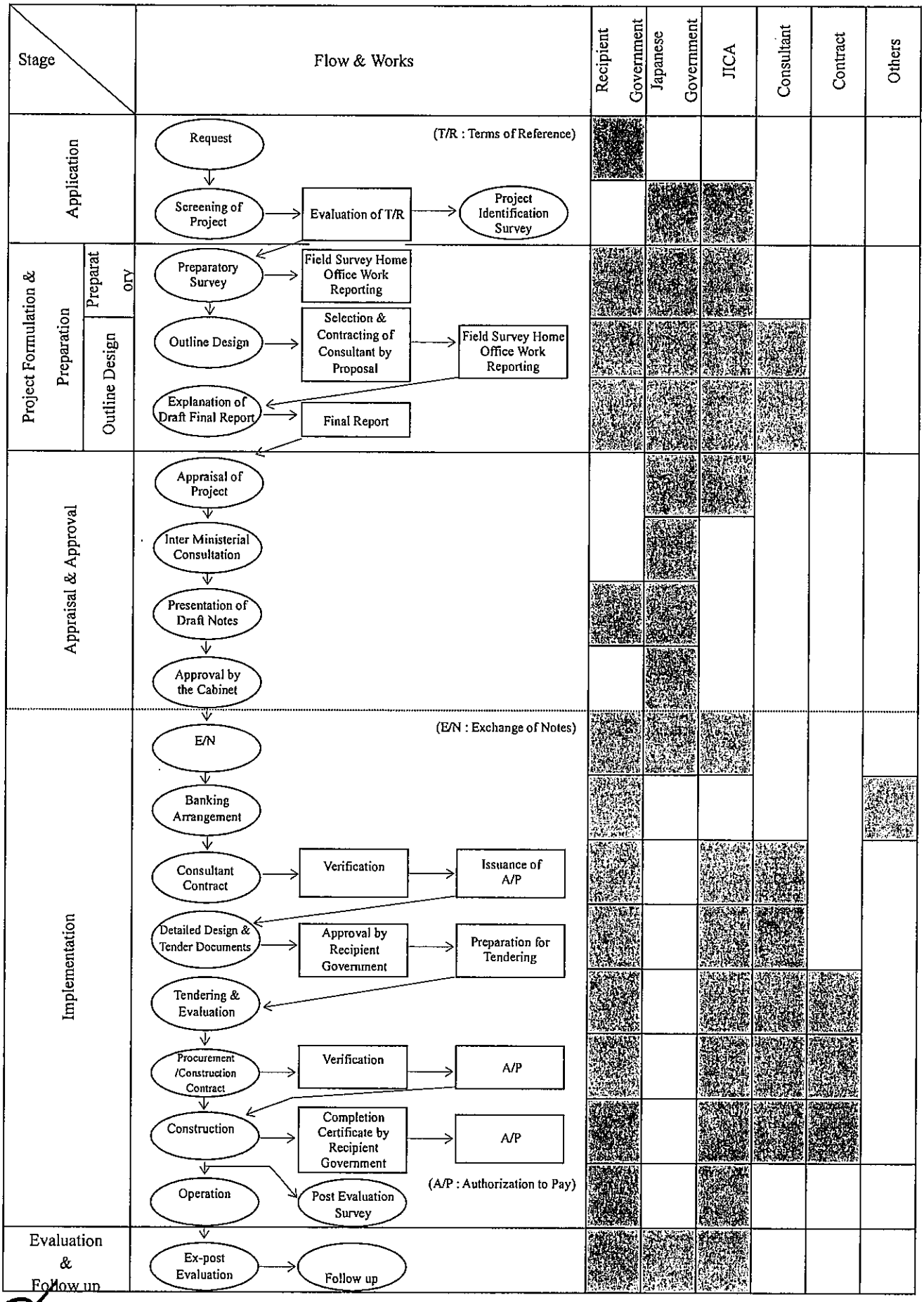
8) Banking Arrangement (B/A)

a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in an authorized foreign exchange bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the verified contracts.
b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an Authorization to Pay issued by the Government of recipient country or its designated authority.

9) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commission to the Bank.

FLOW CHART OF JAPAN's GRANT AID PROCEDURES



Major Undertakings to be taken by Each Governments

No.	Items	To be covered by Grant Aid	To be covered by Recipient Side
1	to secure lots of land necessary for the implementation of the Project and to clear the sites;		●
2	To ensure prompt unloading and customs clearance of the products at ports of disembarkation in the recipient country and to assist internal transportation of the products		
	1) Marine (Air) transportation of the Products from Japan to the recipient country	●	
	2) Tax exemption and custom clearance of the Products at the port of disembarkation		●
	3) Internal transportation from the port of disembarkation to the project site	(●)	(●)
3	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the purchase of the products and the services be exempted		●
4	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		●
5	To ensure that the Facilities be maintained and used properly and effectively for the implementation of the Project		●
6	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project		●
7	To bear the following commissions paid to the Japanese bank for banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●

B/A : Banking Arrangement
A/P : Authorization to Pay

List of Candidate Village

Annex-5

NO	Site/Village Name	Pop.Served	Zone	Location	Division	District
1	Katiborok	350	L	Lawan	Barwessa	Baringo North
2	Konoo	450	L	Lawan	Barwessa	Baringo North
3	Kormor	300	L	Lawan	Barwessa	Baringo North
4	Kapkules	280	L	Kabutiei	Barwessa	Baringo North
5	Kibuliak	650	L	Kabutiei	Barwessa	Baringo North
6	Kapnarok	360	L	Kabutiei	Barwessa	Baringo North
7	Chemondoi	280	L	Kaboskei	Kipsaraman	Baringo North
8	Kapkurukwo	300	L	Kaboskei	Kipsaraman	Baringo North
9	Kapiliany	310	L	Kaboskei	Kipsaraman	Baringo North
10	Moigutwo	340	L	Kaboskei	Kipsaraman	Baringo North
11	Katikit	280	L	Kaboskei Kerio	Barwessa	Baringo North
12	Ayatia	340	L	Kaboskei Kerio	Barwessa	Baringo North
13	Marigut	600	L	Kaboskei Kerio	Barwessa	Baringo North
14	Chesangich	350	L	Kaboskei Kerio	Barwessa	Baringo North
15	Kapamin	290	L	Kapteberewo	Kipsaraman	Baringo North
16	Kapkombe	550	H	Kapteberewo	Kipsaraman	Baringo North
17	Chambai Primary	650	M	Kapteberewo	Kipsaraman	Baringo North
18	Kipsaraman Centre	850	H	Kipkata	Kipsaraman	Baringo North
19	Barketieu Primary	390	L	Kipkata	Kipsaraman	Baringo North
20	Kapkomon	295	L	Kipkata	Kipsaraman	Baringo North
21	Poi	470	M	Kipkata	Kipsaraman	Baringo North
~~22~~	~~Rimo~~	~~490~~	~~M~~	~~Kinyach~~	~~Bartabwa~~	~~Baringo North~~
~~23~~	~~Barinter~~	~~350~~	~~L~~	~~Kinyach~~	~~Bartabwa~~	~~Baringo North~~
~~24~~	~~Toboroi~~	~~900~~	~~L~~	~~Kinyach~~	~~Bartabwa~~	~~Baringo North~~
25	Lingok	280	L	Bartum	Kabartonjo	Baringo North
26	Barkilach	300	L	Bartum	Kabartonjo	Baringo North
27	Usuonin	270	L	Bartum	Kabartonjo	Baringo North
28	Kolongotwo	350	L	Sibilo	Kipsaraman	Baringo North
29	Koibaware	210	L	Sibilo	Kipsaraman	Baringo North
30	Chepkewel	350	L	Sibilo	Kipsaraman	Baringo North
31	Kipchemoi	260	L	Sibilo	Kipsaraman	Baringo North
~~32~~	~~Kapturo~~	~~460~~	~~L~~	~~Ng'orora~~	~~Bartabwa~~	~~Baringo North~~
~~33~~	~~Chepkesin~~	~~360~~	~~M~~	~~Ng'orora~~	~~Bartabwa~~	~~Baringo North~~
~~34~~	~~Baruiya~~	~~260~~	~~L~~	~~Ng'orora~~	~~Bartabwa~~	~~Baringo North~~
~~35~~	~~Chemoe~~	~~450~~	~~L~~	~~Ng'orora~~	~~Bartabwa~~	~~Baringo North~~
36	Barwessa	800	L	Barwessa	Barwessa	Baringo North
37	Kaptiony	340	L	Barwessa	Barwessa	Baringo North
38	Likwon	450	L	Barwessa	Barwessa	Baringo North
39	Seremwo	400	M	Katiorin	Kabartonjo	Baringo North
40	Kapkirwok	600	M	Katiorin	Kabartonjo	Baringo North
41	Kapkomol	300	H	Katiorin	Kabartonjo	Baringo North
42	Kapchepkor	900	H	Saimo Mosop	Kabartonjo	Baringo North
43	Kaptere	800	H	Saimo Mosop	Kabartonjo	Baringo North
44	Boin	410	H	Saimo Mosop	Kabartonjo	Baringo North
45	Tiriondonin	450	H	Ossen	Kabartonjo	Baringo North
46	Kaptum	900	H	Ossen	Kabartonjo	Baringo North
47	Ossen Forest station	740	H	Ossen	Kabartonjo	Baringo North
48	Kaptumin	600	H	Kelyo	Kabartonjo	Baringo North
49	Kureschun	600	H	Kelyo	Kabartonjo	Baringo North
50	Kipkokom	500	M	Kelyo	Kabartonjo	Baringo North
51	Kamagonge	450	L	Marigat	Marigat	Marigat
52	Kamasula	460	L	Marigat	Marigat	Marigat
53	Kapsamson	450	L	Marigat	Marigat	Marigat
54	Sirinyo	340	L	Marigat	Marigat	Marigat
55	Marigat Primary	350	L	Marigat	Marigat	Marigat

List of Candidate Village

Annex-5

NO	Site/Village Name	Pop.Served	Zone	Location	Division	District
56	Kamimba	450	L	Marigat	Marigat	Marigat
57	Marigat ACK	300	L	Marigat	Marigat	Marigat
58	Catholic	280	L	Marigat	Marigat	Marigat
59	Marigat WS	300	L	Marigat	Marigat	Marigat
60	Ndambul	380	L	Marigat	Marigat	Marigat
61	Abori	370	L	Eldume	Marigat	Marigat
62	Ilchurai	260	L	Eldume	Marigat	Marigat
63	Eldume centre	620	L	Eldume	Marigat	Marigat
64	Longiron	490	L	Salabani	Marigat	Marigat
65	Marti	460	L	Salabani	Marigat	Marigat
66	Kampi ya Samaki	1,300	L	Salabani	Marigat	Marigat
67	Lesuuwa	350	L	Ng'ambo	Marigat	Marigat
68	Kipchemei	380	L	Kimalel	Marigat	Marigat
69	Kapkechii	290	L	Kimalel	Marigat	Marigat
70	Loropil	370	L	Kimalel	Marigat	Marigat
71	Ngemboloisa	280	L	Kimalel	Marigat	Marigat
72	Kimalel Hospital	380	L	Kimalel	Marigat	Marigat
73	Kisamisonchun	300	L	Kimalel	Marigat	Marigat
74	Lokoiwopsonchun	270	L	Kimalel	Marigat	Marigat
75	Kinyach	320	L	Kimalel	Marigat	Marigat
76	Ketipkibet	340	L	Kimalel	Marigat	Marigat
77	Tirng'ongwonin	350	L	Kimondis	Marigat	Marigat
78	Kibingor	450	L	Kimondis	Marigat	Marigat
79	Wokerben	400	L	Kimondis	Marigat	Marigat
80	Ng'enyin	370	L	Kimondis	Marigat	Marigat
81	Kabusa	600	L	Ewalel Soi	Marigat	Marigat
82	Barsemoi	500	L	Ewalel Soi	Marigat	Marigat
83	Kiwanja Ndege	340	L	Loboi	Marigat	Marigat
84	Chelaba	460	L	Loboi	Marigat	Marigat
85	Chepkotoiyan	370	L	Sandai	Marigat	Marigat
86	Samuran	450	L	Sandai	Marigat	Marigat
87	Mosuro	340	L	Kiserian	Mukutani	Marigat
88	Logumgum	340	L	Kiserian	Mukutani	Marigat
89	Mochongoi centre	650	H	Mochongoi	Mochongoi	Marigat
90	Kapkechir	600	H	Mochongoi	Mochongoi	Marigat
91	Kamnarok	600	H	Mochongoi	Mochongoi	Marigat
92	Kipkandule	500	H	Mochongoi	Mochongoi	Marigat
93	Sinoni	480	M	Chebinyiny	Mochongoi	Marigat
94	Sambaka	350	M	Chebinyiny	Mochongoi	Marigat
95	Nyalilbuch	280	M	Chebinyiny	Mochongoi	Marigat
96	Sokonin	270	L	Arabal	Mochongoi	Marigat
97	Partalo	480	L	Arabal	Mochongoi	Marigat
98	Menmeno	570	L	Arabal	Mochongoi	Marigat
99	Embosos	340	M	Arabal	Mochongoi	Marigat
100	Loromoru	280	M	Arabal	Mochongoi	Marigat
101	Kaptara	610	L	Lelmen	Salawa	Baringo
102	Kipsoit Primary	890	L	Lelmen	Salawa	Baringo
103	Kakwane	1,300	L	Lelmen	Salawa	Baringo
104	Salawa Hospital	1,200	L	Salawa	Salawa	Baringo
105	Salawa Primary	900	L	Salawa	Salawa	Baringo
106	Eron Primary	870	L	Kabarnet Soi	Salawa	Baringo
107	Kimoso	500	L	Kabarnet Soi	Salawa	Baringo
108	Saonin	560	L	Kabarnet Soi	Salawa	Baringo
109	Oinobmoi centre	1,300	L	Kiboino	Salawa	Baringo
110	Kapsikoryan	950	L	Kiboino	Salawa	Baringo
111	Kurumbopsoo	800	L	Kiboino	Salawa	Baringo

List of Candidate Village

Annex-5

NO	Site/Village Name	Pop.Served	Zone	Location	Division	District
112	Sironoi	500	M	Kiboino	Salawa	Baringo
113	Kasitet	810	L	Kapropita Soi	Salawa	Baringo
114	Sichei	570	L	Kapropita Soi	Salawa	Baringo
115	Kisok	380	L	Kapropita Soi	Salawa	Baringo
116	Katunoi	400	L	Kapkelelwa	Sacho	Baringo
117	Saimet	300	L	Kapkelelwa	Sacho	Baringo
118	Kwamkeiyon	350	L	Chepkero	Sacho	Baringo
119	Chepkero Primary	450	L	Chepkero	Sacho	Baringo
120	Mogorwa	1,200	L	Kisonei	Tenges	Baringo
121	Kisonei Primary	1,100	L	Kisonei	Tenges	Baringo
122	Ochii Primary	600	M	Ochii	Tenges	Baringo
123	Siginwo	800	H	Tenges	Tenges	Baringo
124	Tabarin	660	H	Tenges	Tenges	Baringo
125	Tuluongoi	760	H	Tuluongoi	Tenges	Baringo
126	Tebei	600	L	Tuluongoi	Tenges	Baringo
127	Ilyakat	500	L	Tuluongoi	Tenges	Baringo
128	Katkamuma	400	L	Tuluongoi	Tenges	Baringo
129	Tinomoi	370	L	Bekibon	Tenges	Baringo
130	Timboiywo	1,300	H	Kabasis	Sacho	Baringo
131	Kabasis	1,500	H	Kabasis	Sacho	Baringo
132	Moloi	1,200	H	Orokwo	Sacho	Baringo
133	Kapchomuswo Sec	900	M	Orokwo	Kabarnet	Baringo
134	Kiwanja Ndege	450	M	Orokwo	Kabarnet	Baringo
135	Pemwai centre	800	H	Orokwo	Kabarnet	Baringo
136	Talai	1,400	H	Ewalel	Kabarnet	Baringo
137	Kapkawa	1,200	H	Ewalel	Kabarnet	Baringo
138	Ketindui	600	M	Kabarnet Mosop	Kabarnet	Baringo
139	Serei	1,400	M	Riwo	Kabarnet	Baringo
140	Turupkir	300	H	Kituro	Kabarnet	Baringo
141	Lalwasoyen	280	L	Orus	Tangulbei	East Pokot
142	Monabalei	310	L	Tangulbei	Tangulbei	East Pokot
143	Kiliwok	270	L	Tangulbei	Tangulbei	East Pokot
144	Lomuyek	370	L	Tangulbei	Tangulbei	East Pokot
145	Nakolete	290	L	Korosi	Tangulbei	East Pokot
146	Kalapata	200	L	Tangulbei	Tangulbei	East Pokot
147	Mokongwo	350	L	Tangulbei	Tangulbei	East Pokot
148	Orus	350	L	Orus	Tangulbei	East Pokot
149	Siria	250	L	Orus	Tangulbei	East Pokot
150	Katungura	500	L	Kokwototo	Tangulbei	East Pokot
151	Tuwo	200	L	Loruk	Mondi	East Pokot
152	Lemuyek	250	L	Loruk	Mondi	East Pokot
153	Chebilat	500	L	Loruk	Mondi	East Pokot
154	Riongo	600	L	Naudo	Mondi	East Pokot
155	Naudo	700	L	Naudo	Mondi	East Pokot
156	Akwichatis	1,050	L	Naudo	Mondi	East Pokot
157	Nasorot	980	L	Naudo	Mondi	East Pokot
158	Toplen	460	L	Silale	Mondi	East Pokot
159	Cheptunoyo	260	L	Silale	Mondi	East Pokot
160	Kosiokon	700	L	Loyamorok	Mondi	East Pokot
161	Sukut	200	L	Tirioko	Kolowa	East Pokot
162	Chepunyany	260	L	Tirioko	Kolowa	East Pokot
163	Chepturu	500	L	Kolowa	Kolowa	East Pokot
164	Chepkwarkwarian	400	L	Kolowa	Kolowa	East Pokot
165	Ngoron	900	L	Ng'oron	Kolowa	East Pokot
166	Ngeleiyo	670	L	Ng'oron	Kolowa	East Pokot
167	Kapeomor	980	L	Lokis	Kolowa	East Pokot

List of Candidate Village

Annex-5

NO	Site/Village Name	Pop.Served	Zone	Location	Division	District
168	Chepelion	240	L	Loiwat	Kolowa	East Pokot
169	Krelion	300	L	Kipnai	Kolowa	East Pokot
170	Pkomo	290	L	Lokis	Kolowa	East Pokot
171	Naminito	520	M	Churo	Churo	East Pokot
172	Kacheptuya	370	M	Churo	Churo	East Pokot
173	Cheptangarmot	390	M	Amaya	Churo	East Pokot
174	Motau	240	M	Amaya	Churo	East Pokot
175	Nasaltuko	250	M	Churo	Churo	East Pokot
176	Komolwo	260	M	Churo	Churo	East Pokot
177	Koitimo	350	M	Kaptuya	Churo	East Pokot
178	Lolkos	260	M	Kaptuya	Churo	East Pokot
179	Lomerimeri	360	M	Kaptuya	Churo	East Pokot
180	Tiyati	290	M	Amaya	Churo	East Pokot
181	Katikit	1,050	L	Kositei	Nginyany	East Pokot
182	Chepanda	460	L	Ribko	Nginyany	East Pokot
183	Donge	250	L	Nginyan West	Nginyany	East Pokot
184	Katukumwo	260	L	Kositei	Nginyany	East Pokot
185	Chesakam	600	L	Ribko	Nginyany	East Pokot
186	Chesitet	400	L	Ribko	Nginyany	East Pokot
187	Kasakaram	560	L	Ribko	Nginyany	East Pokot
188	Kamurio	900	L	Kapau	Nginyany	East Pokot
189	Kulol	450	L	Akoret	Nginyany	East Pokot
190	Maron	960	L	Ribko	Nginyany	East Pokot

添付資料５

ケニア共和国
バリンゴ地域村落給水計画
ソフトコンポーネント計画書

平成 23 年 10 月

(2011 年)

株式会社　建設技研インターナショナル

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1. ソフトコンポーネントを計画する背景

1-1. 本体プロジェクトの概要

ケニア国バリンゴ地域村落給水計画では無償資金協力事業として、バリンゴ地域[1]における住民の安全な飲料水へのアクセス状況の改善を図ることを目的として、以下のプロジェクトを実施する。

① 施設建設：独立式給水施設（レベル 1.5）90 ヵ所（深井戸掘削、揚水施設、貯水タンク、公共水栓、水栓までの配管、家畜の水桶）

② 機材調達：維持管理用機材の車両(4WD)1 台、バイク(175cc)2 台、パソコン 1 台、プリンター1 台

③ ソフトコンポーネント：住民及び行政の給水施設の運営・維持管理能力向上

また、責任機関及び実施機関は水・灌漑省及びリフトバレー水サービス委員会（RV-WSB）である。

1-2. バリンゴ地域村落給水の状況

（１）計画対象村落の給水事情等

バリンゴ地域の４県の給水率（安全な水へのアクセス率）はケニア国地方部平均 40%に対してわずか 15～34%であり、水の困窮度は極めて高い地域である。対象村落においては深井戸施設等の給水施設はなく、飲料水源は河川、小川、湖沼・ため池、河床の手掘りピット等である。

計画対象村落の山地部は、降雨量が多いため農業が盛んで人口も多いがが住居のある尾根部には水源はない。このため、標高差の大きい谷部の泉まで水汲みが必要で大変な労力を要している。一方、平地部では、降雨量が少ないため農業はあまり行われておらず､放牧を主体とした牧畜が主産業となっている｡牧畜は生計の糧であるため、家畜の牧草地の場所を居住地として優先されることが多く、住民の水は遠方の水源から水汲みして運搬している場合が多い。水汲み距離は雨季で 0.2～5km だが、乾季では水源が限られ 5～10km と極めて遠い。

（２）村落給水施設の運営・維持管理体制の現状

ケニア国における村落給水の運営・維持管理については、従来から住民により構成された水利用者組合が運営・維持管理を行い、水資源省（旧水灌漑省）の県水資源事務所及び郡水資源事務所が住民の指導・支援を行っていた。

その後、新水法（Water Act 2002）における水セクターリフォームによって、給水施設の運営・維持管理は民間経営法に準拠した水サービス事業体（WSP：Water

[1] 旧バリンゴ県をいい、現在はバリンゴ県、マリガット県、東ポコッと県、北バリンゴ県の４県に分割されている。

Service Provider）（以下「WSP」）が実施することになった。しかし、これまでにWSP が 122（2009 年度）設立されているが、特に人口規模の小さい地方村落部においては、その低収益性から自立的な経営ができる状況にない。バリンゴ地域の WSP（バリンゴ上下水道公社）は、カバルネット市及びマリガット市において行政からの財政支援を受けながら都市型給水事業を実施しているが村落給水まで関与できていない。

したがって、バリンゴ地域の村落給水施設の運営・維持管理の現状としては水セクターリフォーム前と変わらず、村民で構成された水利用者組合が実施しており、機関名称は変更されたが RV-WSB の下部組織にあたる４つ（中央バリンゴ、北バリンゴ、東ポコット、マリガット県）の県水事務所（DWO：District Water Office）が必要に応じて水利用者組合を技術的及び財政的に支援している。なお、村落の要請に応じて県等の地域行政も財政的な支援を行う場合もある。

このように現状と制度との不整合から、村落給水施設の運営・維持管理における実施体制及び役割が曖昧となっている。

（３）DWO による住民支援体制

準備調査によると、バリンゴ地域の４つの DWO のうち、中央バリンゴ県には十分な人数の職員が配置され、維持管理を担当する技術職員も多い（表 1-1 参照）。一方、北バリンゴ県、マリガット県、東ポコット県は人員が少なく、ほとんどが事務系の一般職員であり維持管理に係るノウハウや経験を有した職員は少ない。また、DWO における年間予算(2009)の 99%を人件費が占め、村落給水のフォローアップ活動に必要な車両燃料費等のロジスティックス予算は殆どない状況である。

表 1-1 大バリンゴ県水事務所の職員数

		北バリンゴ	中央バリンゴ	マリガット	東ポコット
所長		1	1	1	1
技術職員		2	17	2	1
事務職員		−	2	−	−
ドライバー		1	2	1	1
その他職員	タイピスト	−	1	−	−
	技術職員補佐	3	11	2	−
	電話受付	−	1	−	−
	プラント操作	−	2	−	−
	一般職員	9	21	7	5
計		16	58	13	8

（４）給水施設の運営・維持管理の状況

準備調査において既存給水施設における運営・維持管理の状況を調査したところ、本無償資金協力事業と同形式であるキオスク（水販売）式給水施設の場合は、水利用者組合がバケツ１杯あたりの単価（2～3Ksh/20L）を決め、水料金徴収人を雇用し、

キオスクにおいて適切に水が販売されていた。キオスク式給水の場合、住民はお金を払わなければ水が入手できないことから、住民は必ず水代を支払っており、確実に料金徴収がなされている。また、給水施設が故障が生じた場合も、売上金により修理対応がなされていた。

一方、ハンドポンプ付き深井戸給水施設の場合は月当たりの定額制で、料金徴収人が各世帯を回り集金することになっている。しかし、集金されていない場合も多く、一部の村落では資金不足によって故障した施設が放置されたままになっていた。

（５）計画対象村落の衛生状況

計画対象村落は深井戸などの安全な飲料水源がないため、村民は不衛生なため池、河川水、河床の手掘り井戸等を長年利用している。また、牧畜業が盛んで、家畜も同様に住民と同じ水源を利用するため、水源の多くが家畜の糞尿等の汚染を受けていると考えられる。

社会条件調査によると、下痢やチフスなど水因性疾患が多く、特に下痢の発生率が高いことが確認されている（2010 年下痢の罹患数は中央バリンゴ県で 7,197 人、人口の約 4.4%、北バリンゴ県で 5,693 人、人口の約 6%）。なお、調査対象村落 150 村のうち 75 村が医療関連施設の無い村落であり、住民は適切な治療を受けることができていない。

1-3. 計画対象村落における運営･維持管理の課題

バリンゴ地域の村落給水状況を踏まえ、本ソフトコンポーネントで対処すべき給水施設の運営・維持管理に関する課題は以下のとおりである。

- 村落給水の運営・維持管理に係る DWO の役割及び責務が不明確である。
- DWO は住民の運営・維持管理を支援するための知識や経験が不足している。
- 対象村落は水利用者組合が整備されていない。
- 対象村落は既存給水施設を有していないため、運営・維持管理のノウハウや経験がない。
- 建設する給水施設の給水範囲は非常に広く、隣接する村落も含めた広域的な給水となる。
- 平地部の村落では生計の糧である牧畜が盛んなため、家畜への給水が必要となるが、揚水量に限りがあるため家畜へ給水した場合は、水不足が生じる。
- 他地域においてソーラーシステムのモジュール（パネル）の盗難が発生している。
- 対象村落の住民は衛生に関する知識が乏しい。

1-4. ソフトコンポーネントの必要性

対象村落には給水施設がなく、住民は給水施設の運営や維持管理に関する経験はも

っていない。このため、建設した給水施設の運営が円滑に開始され、施設運営が持続的に実施されるためには、給水施設の運営・維持管理に関する住民支援は必要不可欠となる。しかしながら、ケニア国側としては広範囲に点在する村落給水施設を包括する住民支援体制の整備及びその活動予算の確保は困難な状況にあり、必要な住民支援が出来ない状況にある。したがって、本ソフトコンポーネントによって、住民への運営・維持管理の指導及び行政の住民支援能力の強化を図る必要がある。

ソフトコンポーネントを実施する上での給水施設建設後の運営・維持管理の枠組みを図 1-1 に示す。

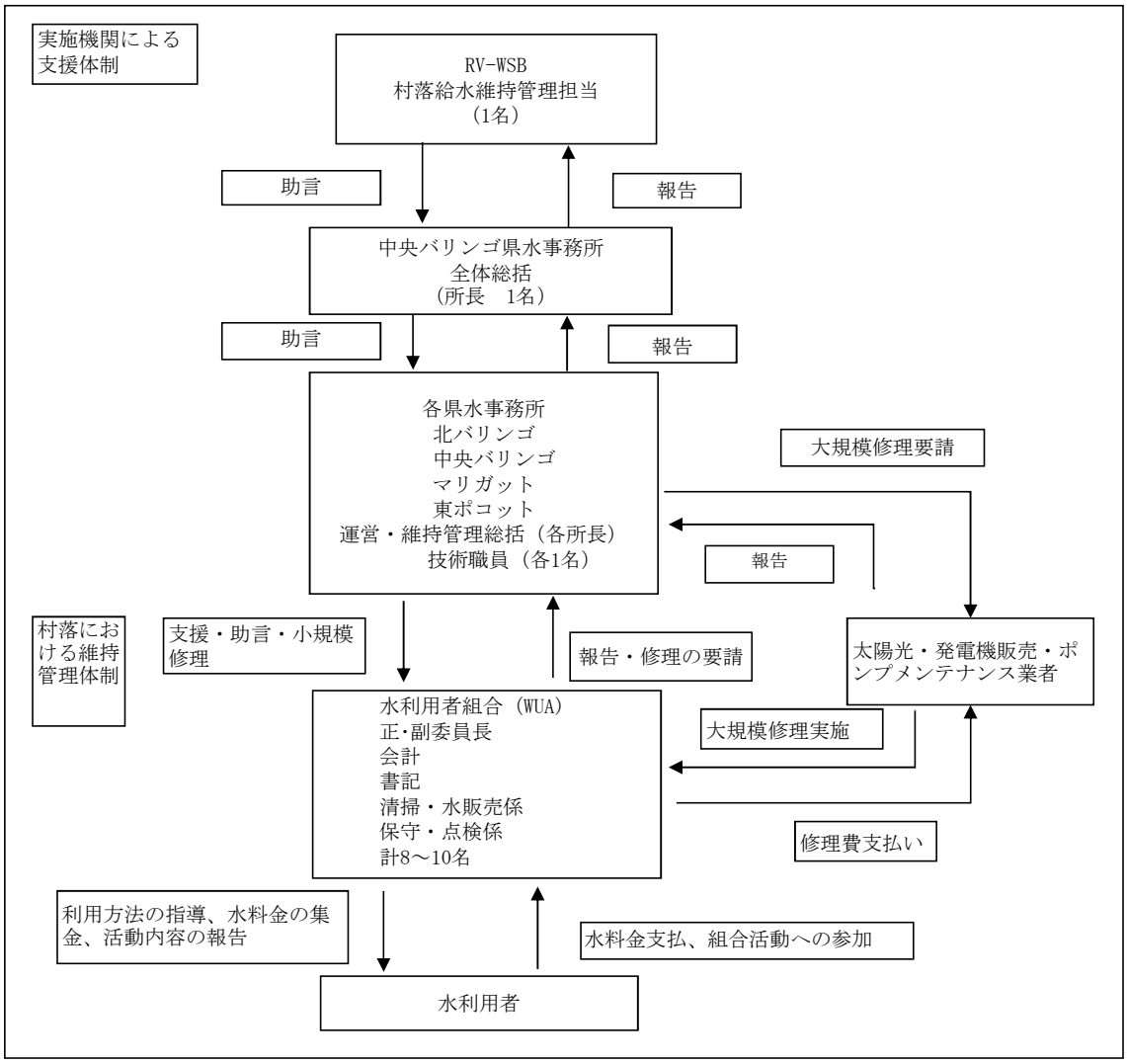


図 1-1　村落給水の運営・維持管理体制

2. ソフトコンポーネントの目標

本ソフトコンポーネントの目標は、「住民が水利用者組合を形成し、村落レベルで給水施設の運営・維持管理を実施し、持続的に給水施設が利用されること」、また、DWO では住民支援に係る職員の経験が不足しているため、水利用者組合による持続的な給水施設の運営・維持管理を実現するため、「DWO の住民支援能力の強化を図る」ことを目標とする。

3. ソフトコンポーネントの成果

以下の成果に対して達成度を確認する。

成果 1：DWO の住民支援能力が強化する

- 県等の地方行政が住民による給水施設の運営・維持管理の必要性について理解する。
- DWO が住民の給水施設運営・維持管理のための、必要な支援内容や支援体制を理解する。
- DWO によって住民支援のための活動計画及びモニタリング計画が策定される。

成果 2：水利用者組合が設立し、給水施設の運営・維持管理活動が実施される

- 住民が水利用者組合の必要性、役割及び業務内容を理解する。
- 住民によって水利用者組合が設立される。
- 水利用者組合が給水施設の運営・維持管理に係る知識を習得する。
- 水利用者組合によって運営規約が策定される。
- 水利用者組合によって給水施設の持続利用のための住民啓発活動が実施される。
- 水利用者組合によって給水施設の運営・維持管理が実践される。

成果 3：住民が水を衛生的に利用する

- 住民が水衛生に係る知識を習得する。
- 住民によって給水施設周辺が清潔に保たれる。

4. 成果達成度の確認方法

（1）成果 1 に対する成果達成度の確認項目と方法

達成度の確認項目	確認方法
（県及び村） ● 各県及び各村長が給水施設の運営・維持管理体制、内容及び行政による支援体制について理解したか ● 各村長が水利用者組合の役割を理解し、設立を支援したか	各種説明会へ参加する。また、説明会の議事録を確認する。
（DWO） ● 給水施設の運営・維持管理体制を理解したか ● 水利用者組合の役割と責任を理解したか ● 運営・維持管理活動支援の活動計画が策定されたか ● 住民及び水利用者組合への研修計画が策定されたか ● 水利用者組合研修が実施できたか ● 住民研修が実施できたか	DWO へのインタビュー聞き取り及び下記書類等の確認 ● 活動計画 ● 協議議事録 ● モニタリング計画表 ● モニタリング結果表

● モニタリング計画が策定されたか ● モニタリング計画に基づき実施されたか	

（２）成果２に対する成果達成度の確認項目と方法

成果達成度の確認項目	確認方法
● 各委員の役割と責任内容が理解されたか ● 水利用者組合が設立されたか ● 水利用者組合の運営規約が策定されたか	水利用者組合へのインタビュー及び下記書類等を確認する ● 組合員名簿 ● 運営規約
● 水利用者組合が研修に参加したか ● 研修受講者が運営・維持管理及び衛生教育について理解したか ● 水利用者組合のオペレータが施設概要や維持管理内容について理解したか ● 住民への啓発活動計画が策定されたか	水利用者組合へのインタビュー及びアンケート
● 水利用者組合により、施設運営及び水衛生に関する住民啓発活動が実施されたか	水利用者組合へのインタビュー及びアンケート
● 給水施設が水利用者組合の規約に沿って運営されているか ● 水利用者組合が定期的に会合を持ち、運営を主体的に行っているか ● 水料金の徴収、経理業務が行われているか ● 水販売所（キオスク）が管理及び整理整頓されているか ● 住民が水料金を支払っているか	水利用者、組合役員に対するインタビュー及び利用状況の確認 出納帳 キオスク運営記録

（３）成果３に対する成果達成度の確認項目と方法

成果達成度の確認項目	確認方法
● 水利用者組合の役割とその業務を理解したか ● 施設の運営・維持管理内容について理解したか	住民へのインタビュー
● 水衛生研修に参加したか ● 参加者が手洗いや衛生的な水や食物の保管を実践しているか	住民へのインタビュー
● 施設周辺が清潔に保たれているか ● 住民が衛生的に水を保管しているか	現地訪問により確認

5. ソフトコンポーネントの活動（投入計画）

投入計画の一覧を下記の表に示す。

また活動の詳細な投入を次ページ以降にまとめる。

成果	活動	必要期間	活動内容	活動主体 対象者	実施時期	成果品
成果1	1-1 住民支援体制についてのワークショップ	1 日	✧ 維持管理・水利用者組合の支援内容協議 ✧ 住民支援体制の協議 ✧ 水利用者組合研修の内容の協議	DWO 職員 現地コンサル 邦人コンサル	工事開始前	研修報告書 研修修了書
	1-2 水利用者組合ハンドブック・衛生教育教材作成ワークショップ	2 日	✧ 衛生教育教材の内容を検討・作成 ✧ 水利用者組合のハンドブックの内容を検討・作成	DWO 職員 邦人コンサル 現地コンサル	工事開始前	研修報告書 研修修了書
成果2	2-1 県行政に対する維持管理体制活動への協力依頼	各県 1 日=4 日	✧ 維持管理体制の説明 ✧ 水利用者組合設立の説明 ✧ 維持管理体制支援活動への協力依頼	DWO 職員 邦人コンサル 県関係者	工事開始前	説明会議事録
	2-2 村長に対する運営維持管理の説明と協力依頼	10 日	✧ 維持管理体制の説明・WUA の役割の確認 ✧ 水利用者組合による運営維持管理体制の説明・協議 ✧ 水利用者組合の設立書作成依頼 ✧ 委員選定の協力依頼	DWO 職員、現地コンサル、邦人コンサル 村長、村関係者	工事開始時	説明会議事録
	2-3 水利用者組合委員に対する研修	毎月 1 回各 4 日間 x 20 回=80 日	✧ 維持管理体制、水利用者組合の役割、業務の確認 ✧ 水利用者組合の規約作成（任期、給水時間、出納帳、給水施設使用上の注意、掃除、お金の保管方法など） ✧ 水料金の設定（村民用及び村民以外用、家畜用の料金設定） ✧ 家畜給水のルール策定（給水方法、取水量の制限） ✧ 施設の盗難、防犯対策 ✧ 住民への施設運営維持及び衛生教育の啓発活動内容の検討 ✧ ソーラー及び発電機施設等の日常の操業、点検、修理手続内容 ✧ 給水施設周辺の整備・管理方法	現地コンサル 邦人コンサル DWO 職員 機材メーカ 水利用者組合	工事開始時～工事中	研修プログラム 議事録 村落活動実施計画 水利用者組合の規約 参加者アンケート
	2-4 水利用者組合による住民研修の実施	90 サイト x 1 日=90 日	✧ 水利用者組合の紹介、活動説明 ✧ 給水施設の運営・維持管理方法及び使用上の注意事項の説明 ✧ 集金の必要性、料金及び集金方法の周知 ✧ 故障時の対応	DWO 職員 現地コンサル 邦人コンサル 水利用者組合 村落住民	施設利用開始時	衛生教育実施記録 村人のアンケート
	2-5 運営維持管理状況モニタリング	90 サイト÷3 ｻｲﾄ/日=30 日	✧ 施設利用・維持管理状況モニタリング ✧ 各種活動成果のインタビュー調査 ✧ 再啓発	DWO 職員 現地コンサル 村落住民 水利用者組合	工事終了後	モニタリングシート
成果3	3-1 衛生教育の実施	2-4 実施時	✧ 村落で衛生教育研修の準備 ✧ 衛生教育研修の実施 ✧ 家畜の給水桶周辺の清掃指導	水利用者組合 現地コンサル 村落住民	工事終了時	衛生教育の活動計画 実施報告

活動 1-1	住民支援体制に関するワークショップ
内容	● ソフトコンポーネントの必要性及び活動の説明 ● 維持管理・水利用者組合の設立に必要な事項（水料金の設定、水利用者組合の役割と業務、故障時の対応、会計の方法など）についての方針を参加者で協議し、話し合い、村人に伝えるべき内容を決定 ● 水利用者組合に対する研修内容の決定 ● 水利用者組合の規約の雛形を検討し策定 ● オペレータおよび水販売係に対する報酬の決定 ● 活動の実施体制、方法、スケジュール等の活動計画の策定
活動者	現地コンサルタントコミュニティ開発（3 名） DWO 職員（維持管理担当）(1 名) 邦人コンサルタント　(1 名)
対象者	活動者に同じ
期間	2 日
実施時期	工事開始前（活動 1-2 と同時期に合計 4 日間のワークショップとして実施）

活動 1-2	水利用者組合ハンドブック・衛生教育教材作成ワークショップ
内容	● 村落に配布する施設利用のハンドブック内容の協議 ● ハンドブックを活用した水利用者組合研修プログラム案の策定 ● 衛生教育教材内容の協議
活動者	現地コンサルタントコミュニティ開発(3 名) DWO 職員（維持管理担当 1-2 名） 邦人コンサルタント(1 名)
対象者	活動主体に同じ
期間	2 日
実施時期	工事開始前（活動 1-1 と同時期に合計 4 日間のワークショップとして実施）

表5-1　ワークショップ概要案

ワークショップ項目（案）	参加者
1.　組織管理	現地コンサルタント DWO 職員 邦人コンサルタント
1-1　村落給水維持管理の概略	
1-2　水利用者組合の形成手続き	
1-3　各組合員の役割と業務	
2.　水利用者組合ﾊﾝﾄﾞﾌﾞｯｸに含む内容の検討と理解	
2-1　給水施設の概略構造、機能、動力ポンプ	
2-2　日常の保守点検、修理	
2-3　故障時の対応について	
2-4　組織の運営規約	
2-5　水料金の集金及び保管、使用	
3.　衛生教育	
3-1　水因性疾患と衛生の基礎知識	
3-2　水の汚染原因と防止法	
3-3　給水施設利用の衛生面での意義	

活動 2-1	県行政関係者に対する維持管理体制活動への協力依頼
内容	● 北バリンゴ、バリンゴ、マリガット、東ポコット県の各県庁で県の行政関係者に対し、給水施設の運営・維持管理体制の説明と協力依頼ソフトコンポーネント活動の説明と協力依頼
活動者	DWO 職員(1 名) 邦人コンサルタント(1 名)
対象者	北バリンゴ、バリンゴ、マリガット、東ポコット県の各県庁
期間	4 日間
実施時期	工事開始前

活動 2-2	村長等（村長、校長、村の長老）に対する運営・維持管理の説明と協力依頼
内容	● 村長等へ給水施設の運営・維持管理体制及びソフトコンポーネント活動の説明と協力依頼 ● 給水施設建設に必要な村落側の作業（村落内のリグのアクセス路整備、施設用地の確保整備）の協力要請 ● 水利用者組合の設立要請 ● 研修実施の各種調整の要請
活動者	DWO 職員(1 名) 現地コンサルタントコミュニティ開発（1 名） 邦人コンサルタント(1 名)
対象者	プロジェクト対象村落村長、責任者（学校の場合） （10-20 村落ずつ近接する村落から集めて実施）
期間	10 日間
実施時期	工事開始時

活動 2-3	2-3 水利用者組合に対する研修
内容	（成功井として確定した村落が対象） ● 水利用者組合の研修実施 ・ 維持管理体制、水利用者組合の役割、業務の確認 ・ 水利用者組合の規約作成（任期、給水時間、出納帳、給水施設使用上の注意、掃除、お金の保管方法など） ・ 水料金の設定（村民用及び村民以外用、家畜用の料金設定） ・ 家畜給水のルール策定（給水方法、取水量の制限） ・ 施設の盗難、防犯対策、住民への啓蒙方法 ・ 住民への施設運営維持及び衛生教育の啓発活動内容の検討 ・ 機材メーカからソーラー及び発電機施設等の日常の操業及び点検等の基礎的な技術講習、故障時の対処方法など ・ 給水施設周辺の整備・管理方法 ● 施設使用開始時の住民研修プログラムの検討 ● 研修に参加した組合役員は、村落に戻り他の水利用者組合委員に研修内容を共有
活動者	現地コンサルタントコミュニティ開発（3 名） DWO 職員(1 名) 邦人コンサルタント(1 名) 機材メーカーの技術者
対象者	事業対象村落の水利用者組合役員 3 名（委員長、会計、オペレータ） 4～5 村落ずつカバルネットまたはマリガット市に集めて実施
期間	各回 4 日間　（全 20 回）
実施時期	工事開始時～工事期間中

活動 2-4	水利用者組合による住民研修の実施
内容	● 住民研修の実施 ・ 水利用者組合の紹介、役割、活動内容 ・ 水利用者組合の運営規約 ・ 給水施設の運営・維持管理方法（施設利用方法、料金、水収入の用途、故障時の対応、施設の清掃、家畜給水の留意点等） ・ 料金徴収の必要性、維持管理計画
活動者	水利用者組合役員 DWO 職員(1 名) 現地コンサルタントコミュニティ開発（1 名） 邦人コンサルタント(1 名)
対象者	計画対象村落の住民（90 サイト）
期間	各村落 0.5 日間
実施時期	工事後

活動 2-5	運営維持管理状況のモニタリング
内容	● 施設利用開始後、水利用者組合の活動状況、施設の稼働状況についてモニタリングを実施（チェック用紙を用い、水利用者組合の活動状況、給水施設の利用状況を確認、村落における情報の収集及び必要に応じた指導）
活動者	現地コンサルタントコミュニティ開発(1 名) DWO 職員(1 名) 邦人コンサルタント(1 名)
対象者	プロジェクト対象村落の住民（90 サイト）
期間	1 日/3 サイト
実施時期	施設使用開始後

表2-5　モニタリング項目（例）

村名	規約有無	清掃記録	キオスク業務記録	出納帳記録	整備故障記録	周辺整備	住民啓発活動実施・未実施
村落 A							
村落 B							
村落 C							

活動 3-1	水利用者組合による住民への衛生教育の実施
内容	● 住民衛生研修内容の検討及び準備 ● 住民衛生研修の実施 ・ 家庭における水利用の衛生 ・ 水因性疾患の原因 ・ 家畜の影響 ・ 水場の清掃内容 ● 住民による衛生活動計画の策定 ● 水利用者組合による住民の衛生環境のモニタリング、指導
活動者	水利用者組合役員 現地コンサルタントコミュニティ開発(1 名) DWO 職員(1 名)
対象者	プロジェクト対象村落の住民（90 サイト）
期間	2-4 のプログラム時に実施
実施時期	工事中～工事後

6.　ソフトコンポーネントの実施リソースの調達方法

本事業の実施主体の DWO のカウンターパートは人的、予算的に限られているため、本ソフトコンポーネントの実施リソースは、邦人コンサルタントの監理のもと現地カウンターパート担当 1 名と現地の文化、言語に精通し、村落開発や水・衛生分野の知識及び啓発活動の経験を有した現地コンサルタントをコミュニティ開発員として現地再委託により 3 名動員する。プログラムの進捗監理はコミュニティ開発員（現地コンサルタント）が実施するが、邦人コンサルタントの専門家がスポットで現地に赴き、実施状況を確認し、必要に応じて行政及び住民に対して指導を行う。

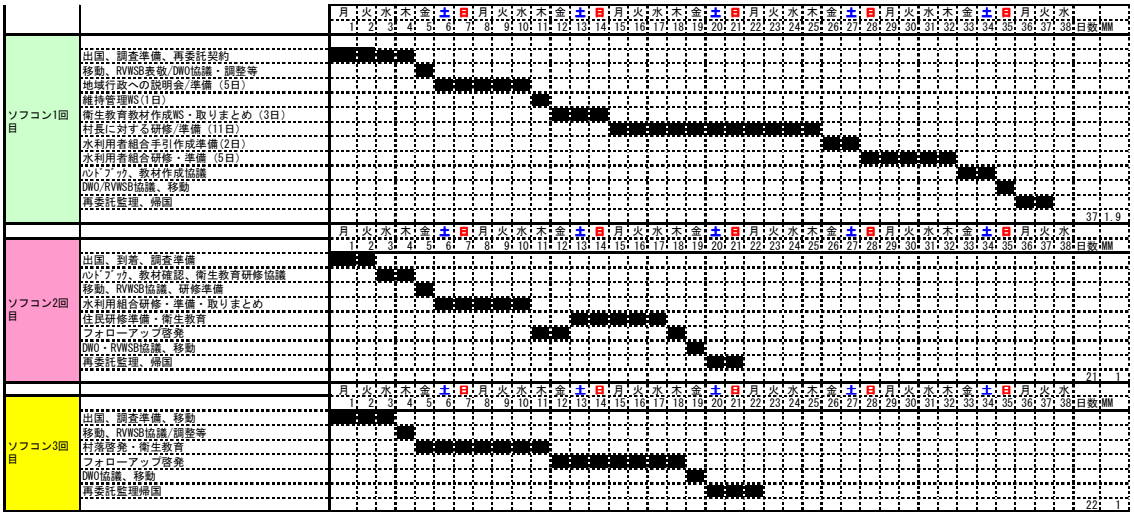
(1)実施リソース

1）邦人コンサルタント要員　1 名　4.0M/M（運営・維持管理計画/衛生教育担当）

ソフトコンポーネント活動全体の計画立案及び実施監理を行う。また、現地コンサルタント、カウンターパート及び住民に対して専門的な指導を行う。また、ワークショップ講師及び現地コンサルタントの選定、TOR の作成、契約業務等の事務業務も担当する。

業務日数算出根拠を下表のとおり。

表 2-6　邦人業務日数算出根拠



1 回目 37 日、2 回目 21 日、3 回目 22 日、計 80 日/20 日=4.0MM

2）現地コンサルタント　3 名　18.4M/M　（コミュニティ開発/教材作成担当）

参加型の村落給水維持管理体制の構築のため、村落給水、コミュニティ開発の実績と経験を有する現地コンサルタントを配置する。なお、邦人コンサルタント監理のもと、カウンターパート職員と共同でワークショップの開催、水利用者組合の研修、住民啓発活動及びモニタリングの調整等を担当する。また、各種活動を通して、水利用者組合ハンドブック及び衛生教育教材を作成する。

業務日数 368 日。368/20=18.4M/M

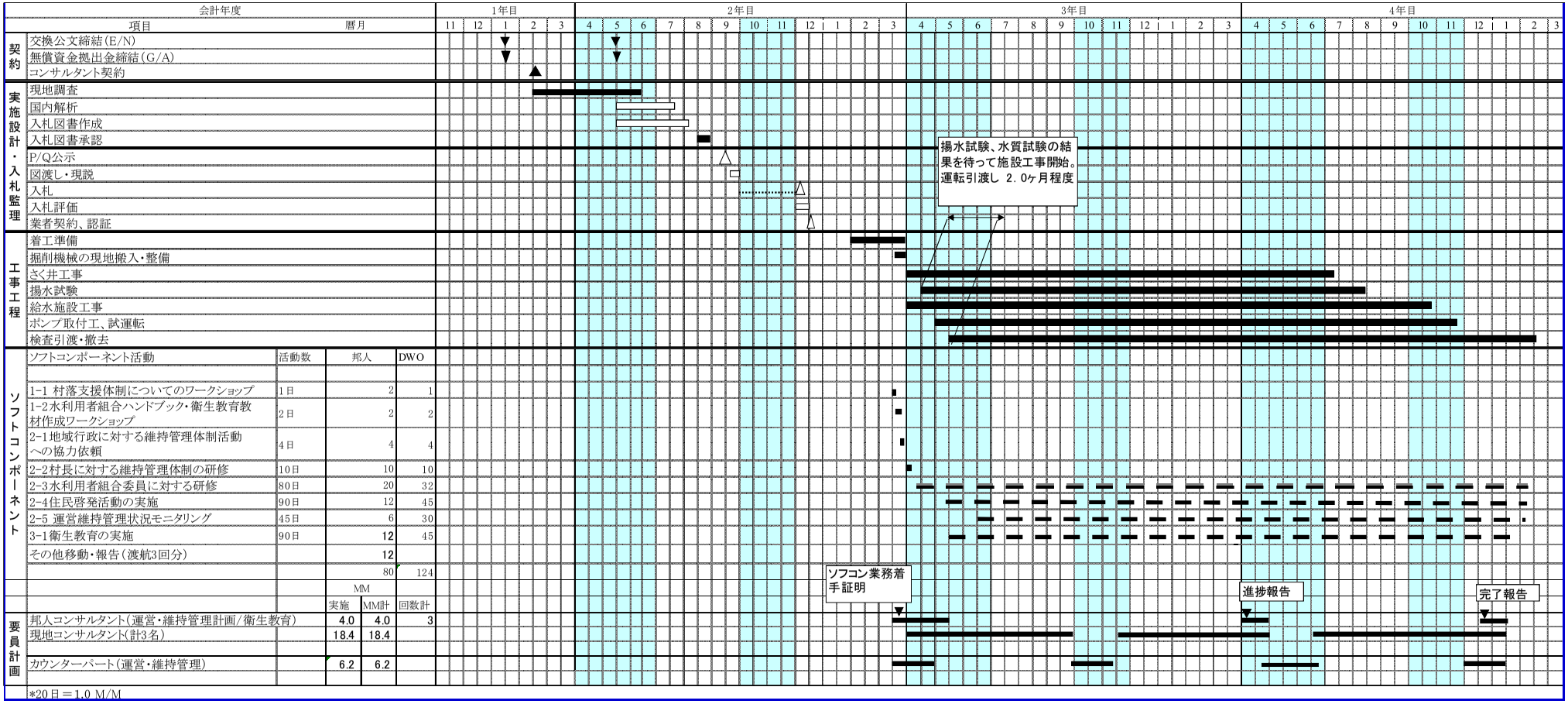
活動	人数	日数	計（日数）
1-1、1-2	3	4	12
教材作成	2		21
2-2	1	10	10
2-3	3	80	240
2-4	1	45	45
3-1	1	30	30
その他打合せ及び事前調整			10
計			368

3）実施機関カウンターパート要員　１名　6.2M/M　（運営・維持管理主担当）

各活動の業務調整､現地コンサルタント及び邦人コンサルタントの活動を支援する。また、施設建設後及び水利用者組合の設立後、運営・維持管理のフォローアップ及びモニタリングを行う。なお、担当者は中央バリンゴ県水事務所のスタッフを想定している。

業務日数 124 日。124/20=6.2M/M

7.　ソフトコンポーネントの実施工程



8. ソフトコンポーネントの成果品

成果品は以下を予定している。

1) 水利用者組合ハンドブック
2) 水利用者組合の設立に関する資料（組合員名簿、運営規約、出納帳）
3) 衛生教育教材
4) 運営・維持管理のモニタリング結果表
5) ソフトコンポーネント完了報告書

9. ソフトコンポーネントの概略事業費

日本側負担経費： 18,889 千円

先方側負担経費： 586 千円（558,000Ksh）（日当・給与・交通費）

日本側負担経費の内訳

直接経費： 13,180 千円

そのうち、現地再委託費：8,274 千円

直接人件費：2,504 千円

間接費：3,205 千円

合計額：18,889 千円

10. 相手国実施機関の責務

本ソフトコンポーネントを実施し、また、プロジェクト成果を持続させるために必要な責務は、下記のとおりである。

① 本ソフトコンポーネントの実施に必要な職員を確保し、配置する（各県で運営維持管理主担当 1 名以上）
② ①の活動に必要な経費（交通費、日当等）を負担する。
③ 会議や研修に必要とする会議室及び事務所を提供する。
④ 計画の実施に必要な情報や資料を提供する。
⑤ 計画の実施に必要な関係機関、組織、行政及び村落との連絡調整を行う。
⑥ 水利用者組合の設立を支援する。
⑦ 住民に対して運営・維持管理及び衛生教育に関する指導を実施する
⑧ 施設建設後、給水施設及び水利用者組合のモニタリングを定期的に実施し、住民の運営・維持管理状況を把握する。また、必要に応じて指導を実施する。

番号	名称	形態 図書・ビデオ・地図・写真等	オリジナル/コピー	発行機関	発刊年
1	The National Water Services Strategy (NWSS) (2007-2015)	書類	コピー	Ministry Of Water and Irrigation	2007/9
2	National Development Plan 2002-2008	書類	コピー	Ministry of Planning	2004
3	Baringo District Development Plan 2002-2008	書類	コピー	Ministry of Finance and Planning	2004
4	East Pokot District Development Plan 2008-2012	書類	コピー	Ministry of State for Planning National Development and Vision 2030	2010/6
5	The Kenya gazette	図書	オリジナル	Authority of the Republic of Kenya	2010
6	Baringo District Development Plan 2005-2010	書類	コピー	National Coordination Agency for Population and Development	2005
7	Practical Manual For Water Supply Services In Kenya	ファイル	コピー	Ministry of Water and Irrigation	2005/10
8	The National Water Resources Management Strategy 1st Ed. (NWRMS) (2007-2009)	書類	オリジナル	Ministry of Water and Irrigation	2007/1
9	2009 Kenya Population and Housing Census Volume IB (Population Distribution by Political Unites)	書類	オリジナル	Kenya National Bureau of Statistics	2010/8
10	2009 Kenya Population and Housing Census Volume II (Population and Household Distribution by Socio-Economic Characteristics)	書類	オリジナル	Kenya National Bureau of Statistics	2010/8
11	2009 Kenya Population and Housing Census Volume IC (Population Distribution by Age, Sex and Administrative Unites)	書類	オリジナル	Kenya National Bureau of Statistics	2010/8
12	Demographic and Health Survey	書類	オリジナル	Kenya National Bureau of Statistics	2008/9
13	2009 Kenya Population and Housing Census Volume IA (Population Distribution by Administrative Unites)	書類	オリジナル	Kenya National Bureau of Statistics	2010/8
14	A Socio-Economic Profile (WELL-BEING IN KENYA)	書類	オリジナル	Kenya National Bureau of Statistics	2008/6
15	Basic Report (Kenya Integrated Household Budget Survey 2005/06)	書類	オリジナル	Kenya National Bureau of Statistics	2007/8
16	Map of Kenya　76/1～4、77/1･3、90/1～4、91/1～4、104/1～4、105/1～4、118/1･2	地図	オリジナル	Government of United Kingdom	1982
17	Kenya Administrative Boundary Map	地図	オリジナル	Survey of Kenya	1998
18	The project for groundwater development in rural districts under Japanese grant aid, A Trainer's Manual	図書	オリジナル	Ministry of Environment and Natural Resources	1999

Social Survey

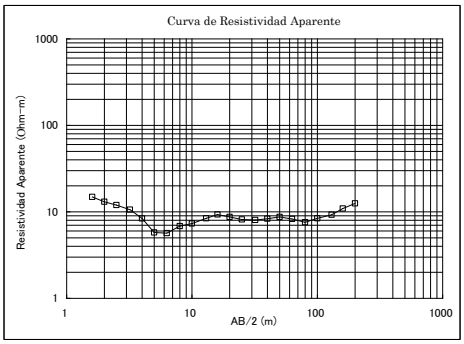
NO	Site/Village Name	Pop. Served	village Population	Site Population	Ethnic Tribe	Village Type	Medical facilities	Public MTG place	Day school students	Boarding school students	% of school children	Average nr of Cattles per household	Average nr of Sheep per household	Water source	Diarrhea	% population ratio	Typhoid	% population ratio	Dry season Distance to water (km)	Vehicle accessibility (Dry Season)	Vehicle accessibility (Rain Season)	Electricity	Distance to electricity (m)	Transformer	Distance to transformer (m)	Public transport	Mobile antenne	Primary industry	Average household monthly income (ksh)	Water consumption	発電機	Willingness to join WSP/RVWSB	Willingness to form VHWC	Payment method preferable	Daily water payable for domestic Use	Price of Water per 20 litters by survey	CDF	Availability of water committee	Availability of repairman	Activities of NGOs for water supply
1	Katiborok	350	850	450	Tugen	Rural	Dispensary	V. office	520	0	80	20	30	River	200	23.5	10.0	1.2	1	No Good	No Good	Non	1000	Non	more than 600	Non	No Good	Livestock/Agricultu	10000	15		Y	Y	per Bucket	75	20	Available	Available	No	Non
2	Konoo	450	2,727	450	Tugen	Rural	Non	V. office	252	0	50	20	40	River	180	6.6	40.0	1.5	0.2	Good	No Good	Non	more than 1000	Non		Non	No Good	Livestock/Agricultu	10000	30		Y	Y	per Bucket	75	20	Available	Available	No	Existent
3	Kormor	300	2,727	300		Rural	Non	V. office	350	0	70	10	30	River	30	1.1	40.0	1.5	1	Good	No Good	Non	more than 1000	Non		Non	Good	Livestock	12000	18		Y	Y	per Bucket	95	20-30	Available	Available	No	Non
5	Kibuliak	650	1,540	670	Tugen	Rural	Dispensary	Field	772	0	67	15	30	River	30	1.9	3.0	0.2	1	No Good	Impossible	Single Ph	500	Existent	600	Non	No Good	Livestock/Agricultu	10000	20		-	Y	per Month	140	20	Available	Available	Available	Non
6	Kapnarok	360	2,559	360	Tugen	Rural	Non		360	0	38	20	40	River	250	9.8	7.0	0.3	5	Good	No Good	Non	more than 1000	Non		Non	No Good	Livestock	12000	36		Y	Y	per Bucket	75	20	Non	Available	No	Existent
7	Chemondoi	280	1,660	280	Tugen	Rural	Dispensary	Field	567	0	70	40	40	River	80	4.8	60.0	3.6	3	No Good	Impossible	Non	more than 1000	Non	more than 600	Non	Good	Livestock	12000	18		Y	Y	per Bucket	75	20	Available	No	-	Non
10	Moigutwo	340	4,226	340	Tugen	Rural	Dispensary	Field	740	0	90	40	40	River	80	1.9	60.0	1.4	3	Good	No Good	Non				Non	No Good	Livestock/Agricultu	10000	16		Y	Y	per Bucket	300	30-40	Available	Available	No	Non
11	Katikit	280	1,407	280	Tugen	Rural	Dispensary	Field	0	0	93	20	40	River	100	7.1	25.0	1.8	3	No Good	Impossible	Non	more than 1000	Non	more than 600	Non	Good	Livestock	12000	16		-	Y	per Bucket	75	10-20	Available	No	-	Non
12	Ayatia	340	636	340	Tugen	Rural	Dispensary	Field	300	0	83	20	40	River	200	31.4	25.0	3.9	more than 5	No Good	Impossible	Non	more than 1000	Non	more than 600	Non	Good	Livestock	12000	37		-	Y	per Bucket	75	20	Available	No	-	Non
13	Marigut	600	1,407	430	Tugen	Rural	Dispensary	Field	463	0	93	20	40	River	100	7.1	30.0	2.1	5	No Good	Impossible	Non	more than 1000	Non	more than 600	Non	Good	Livestock	12000	50		-	Y	per Bucket	110	20	Available	No	-	Non
14	Chesangich	350	480	350	Tugen	Rural	Non	Field	330	0	85	20	40	River	70	14.6	20.0	4.2	0.2	No Good	No Good	Non	more than 1000	Non	more than 600	Non	Good	Livestock	12000	50		-	Y	per Bucket	90	50	Non	Available	No	
15	Kapamin	290	1,492	690	Tugen	Semi urban	Dispensary	School	515	0		7	15	River	60	4.0	35.0	2.3	0.2	Good	No Good	Three Ph	1000	Existent	600	Non	No Good	Agriculture	8000	7		-	Y	per Bucket	170	20	Available	No	-	Non
16	Kapkombe	550	1,400	1,000	Tugen	Semi urban	Dispensary	V. office	280	0	88	5	7	River	60	4.3	35.0	2.5	1	Good	No Good	Three Ph	1000	Existent	600	Non	Good	Agriculture	8000	8		-	Y	per Bucket	120	20	Non	Available	-	Non
17	Chambai Primary	650	775	650	Tugen	Rural	Non	School	400	0	90	7	20	River	60	7.7	35.0	4.5	2	No Good	No Good	Three Ph	1000	Existent	more than 600	Non	No Good	Agriculture	8000	8		-	Y	per Bucket	230	20	Available	No	-	Non
19	Barketieu Primary	390	1,800	400	Tugen	Rural	Dispensary	V. office	72	0	36	2	3	River	429	23.8	120.0	6.7	1	No Good	Impossible	Non	500	Existent	600	PSV	Good	Agriculture	8000	8		-	Y	per Month	70	10-20		No	-	Existent
24	Toboroi	900	2,200	600	Tugen	Rural	Non	Field	910	510	55	40	40	Dugwell	80	3.6	60.0	2.7	3	No Good	No Good	Non					No Good	Livestock	12000	22		Y	Y	per Bucket	260	30-40	Available	Available	No	Non
25	Lingok	280	2,500	280	Pokot	Rural	Non	V. office	360	0	80	22	40	River	219	8.8	312.0	12.5	2	No Good	Impossible	Non	more than 1000	Non	more than 600	Moto/occasion	Good	Livestock/Agriculture	10000	24		Y	Y	per Bucket	60	20-30	Available	Available	No	Existent
26	Barkilach	300	1,500	400	Tugen	Rural	Dispensary	V. office	0	0	61	15	33	River		0.0		0.0	2	Impossible	Impossible	Non	more than 1000	Non	more than 600	PSV	No Good	Livestock	12000	20		-	Y	per Bucket	25	20		Available	No	Existent
27	Usuonin	270	2,000	300	Pokot	Rural	Dispensary	V. office	670	0	74	6	7	River	219	11.0	312.0	15.6	1	No Good	Impossible	Non	more than 1000	Non	more than 600	PSV	No Good	Livestock	12000	20		-	Y	per Bucket	25	25-30	Available	Available	Available	Existent
28	Kolongotwo	350	2,732	420	Tugen	Rural	Dispensary	V. office	0	0	65	10	13	Dugwell	300	11.0	300.0	11.0	2	No Good	No Good	Non	more than 1000	Non		PSV	Good	Livestock	12000	50		-	Y	per Bucket	25	20	Available	-	-	Existent
29	Koibaware	210	3,500	210	Tugen	Rural	Dispensary	V. office	1090	0	98	40	110	Dugwell	180	5.1	140.0	4.0	2	No Good	No Good	Non	more than 1000	Non	more than 600	PSV	Good	Livestock	12000	30		-	Y	per Bucket	25	20	Available	-	-	Existent
30	Chepkewel	350	4,172	350	Tugen	Rural	Dispensary	V. office	200	0	90	10	10	River	80	2.3	60.0	1.7	1	No Good	No Good	Non	more than 1000	Non	more than 600	PSV	Good	Livestock	12000	25		-	Y	per Bucket	25	20	Available	-	-	Existent
31	Chemorongion	420	3,090	350	Tugen	Rural	Dispensary	Non	600	0	80	33	40	River	300	9.7	300.0	9.7	3	Good	No Good	Non	more than 1000	Non	more than 600	PSV	Good	Livestock	12000	13		-	Y	per Bucket	25	25-30	Available	Available	No	Non
32	Kapturo	460	2,400	460	Tugen	Rural	Dispensary	church/sch	600	0	70	7	11	River	80	3.3	60.0	2.5	2	No Good	No Good	Non				Non	No Good	Livestock	12000	17		Y	Y	per Bucket	330	30-50	Available	Available	-	Non
33	Rondinir	400	1,400	400	Tugen	Rural	Dispensary	V. office	400	0	61	5	15	River	219	15.6	229.0	16.4	2	Impossible	Impossible	Non	more than 1000	Non	more than 600		No Good	Livestock	12000	35		-	Y	per Bucket	25	20		Available	-	Existent
35	Chemoe	450	739	550	Tugen	Rural	Non	V. office	125	0	42	20	40	Dugwell	250	33.8	50.0	6.8	2	Good	No Good	Single Ph	1000	Existent	more than 600	PSV	Good	Livestock/Agricultu	10000	47		-	Y	per Bucket	25	5-18		-	No	
36	Barwessa	800	3,047	800	Tugen	Rural	ealth Cente	V. office	630	100	80	20	40	River	200	6.6	30.0	1.0	3	Good		Non	more than 1000	Non	more than 600	Non	Good	Livestock	12000	13		Y	Y	per Bucket	75	20		Available	No	Existent
38	Likwon	450	1,655	470	Tugen	Rural	Dispensary	Field	340	120	65	7	10	River	400	24.2	220.0	13.3	1	No Good	No Good	Non	53000	Non	47000	Non	Good	Livestock	12000	50		Y	Y	per Bucket	125	25	Available	No	-	Existent
39	Seremwo	400	1,044	400	Tugen	Rural	Non	Field	220	0	80	7	13	Dugwell	62	5.9		0.0	0.2	Others	Others	Non	more than 1000	Non	more than 600	Non	No Good	Agriculture	8000	13		-	Y	per Bucket	180	20	Available	No	-	Non
40	Kapkirwok	600	1,031	600	Tugen	Rural	Non	Field	350	570	78	7	11	Dugwell	42	4.1		0.0	3	Others	Others	Single Ph	1000	Existent	more than 600	PSV	No Good	Agriculture	8000	13		-	Y	per Bucket	290	20		No	No	Non
41	Kapkomol	300	931	300	Tugen	Rural	Non	Field	350	0	90	5	13		5000	537.1		0.0	1	Impossible	Impossible	Non	more than 1000	Non	more than 600	Non	No Good	Agriculture	8000	13		Y	Y	per Bucket	250	20	Available	No	No	Non
42	Kapchepkor	900	3,600	930	Tugen	Semi urban	Non	V. office	680	370	27	7	5	River		0.0		0.0	0.2	No Good	No Good	Three Ph	500	Existent	600	Non	No Good	Agriculture	8000	6		Y	Y	per Bucket	100	10-20	Available	Available	Available	Non
43	Kaptere	800	2,300	800	Tugen	Semi urban	Dispensary	Non	1050	420	80	5	3	River		0.0		0.0	3	Good	No Good	Single Ph	500	Existent	600	PSV	Good	Agriculture	8000	38		Y	Y	per Month	150	20-30		Non	No	Non
44	Boin	410	550	400	Tugen	Semi urban	Non	Field	200	0	90	7	7	River		0.0		0.0	1	Good	No Good	Three Ph	100	Existent	100	Non	Good	Agriculture	8000	11		Y	Y	per Bucket	200	10	Available	Available	No	Non
45	Tiriondonin	450	2,010	450	Tugen	Semi urban	Non	V. office	560	450	66	7	11	River/Spring	5000	248.8		0.0	0.2	Good	No Good	Three Ph	100	Existent	600	Non	No Good	Livestock/Agricultu	10000	4		Y	Y	per Bucket	90	10-40	Available	Available	Available	Non
46	Kaptum	900	3,521	620		Rural	ealth Cente	Field	1130	450		6	7		5000	142.0		0.0	1	Impossible	Impossible	Single Ph	500	Existent	600	Moto	Fair	Agriculture	8000	11		Y	Y	per Bucket	230	20	Available	Available	No	Non
47	Ossen Forest station	740	3,021	890	Tugen	Rural	ealth Cente	Field	1240	450	74	6	12			0.0		0.0	2	Impossible	Impossible	Single Ph	100	Existent	600	Moto	Fair	Agriculture	8000	8		Y	Y	per Bucket	130	10-20	Available	Available	No	Non
48	Kaptumin	600	2,700	1,200	Tugen	Rural	Dispensary	sch/chu/fie	350	0	98	7	14	River/Spring		0.0		0.0	2	Good	No Good	Three Ph	500	Existent	600	PSV	Good	Agriculture	8000	8		Y	Y	per Bucket	260	20-30	Available	-	Available	Non
49	Kureschun	600	2,000	1,500	Tugen	Semi urban	Non	school	280	0	95	7	7	River/Spring		0.0		0.0	1	Good	No Good	Three Ph	1000	Existent	more than 600	PSV	Good	Livestock/Agricultu	10000	10		-	Y	per Bucket	300	20-30		-	-	Non
50	Kipkokom	500	2,000	1,000	Tugen	Rural	Non	school	400	0	95	7	5	River/Spring	250	12.5	70.0	3.5	2	Good	No Good	Non	more than 1000	Non	more than 600		Good	Agriculture	8000	5		-	Y	per Bucket	110	10-20	Available	-	-	Non
51	Kamagonge	450	1,146	450	Tugen	Rural	Non	Non	0	450	80	10	30	Communal fa	2766	241.4	17.0	1.5	1	No Good	Impossible	Non	500	Non		PSV	Good	Others	10000	45		-	Y	Don't like to pay	75	20	Non	-	-	Existent
53	Kapsamson	450	4,393	450	Tugen	Rural	Non	Non	640	0	49	15	16	River	2766	63.0	17.0	0.4	3	No Good	Impossible	Non	1000	Non	more than 600	Non	Good	Others	10000	47		-	Y	per Bucket	340	16-20	Non	Non	-	Existent
54	Sirinyo	340	1,700	340	Tugen	Rural	Non	Non	0	0	80	2	10	River		0.0		0.0	3	No Good	Impossible	Non	more than 1000	Non	more than 600	Non	Good	None	10000	28		-	Y	per Bucket	90	30	Available	Non	-	Non
56	Kamimba	450	1,146	450	Tugen	Rural	Non	Non	81	0	73	5	20	River		0.0		0.0	1	No Good	Impossible	Non	1000	Non	more than 600	Non	Good	Others	10000	50		-	Y	Don't like to pay	360	10	Available	Non	-	Non
58	Catholic	280	4,593	390	Kisii	Semi urban	Dispensary	Aids MTG	296	0	23	7	15	Spring/Piped	49	1.1	33.0	0.7	0.2	Good	Good	Non	100	Existent	600	Moto	Good	Others	10000	50		Y	Y	per Bucket	70	5-10	Non	Non	No	Non
60	Ndambul	380	2,015	380	Tugen	Rural	Non	Water office	770	0	66	5	5	Spring/Commual faucet		0.0		0.0	1	Good	No Good	Non	100	Non	more than 600	Boda boda	Good	None	10000	48		Y	Y	per Bucket	140	3-20	Available	Available	Available	Existent
61	Abori	370	709	370	Jemps	Rural	Non	Field	390	0	92	7	15	River	70	9.9	10.0	1.4	3			Single Ph		Non	more than 600	Non	Good	Livestock	12000			Y	Y					Available	Available	Available	Non
62	Ilchurai	260	689	260	Jemps	Rural	Non	V. office	235	0	85	10	25	Dugwell		0.0		0.0		Good	Good	Non	1000	Non	more than 600	PSV	Good	Livestock/Agricultu	10000	25		-	Y	per Bucket		15-20		Non	-	Existent
63	Eldume centre	620	2,638	620		Rural	Non	V. office	490	30	65	3	20	River		0.0		0.0	3	No Good	Impossible	Single Ph	500	Existent	600	Moto/regular	Good	Livestock	12000			-	Y				Non	Non	-	Non
64	Longiron	490	709	490	Jemps	Rural	Non	Non	224	0	80	7	25	River	2766	390.1	17.0	2.4	1	No Good	Impossible	Non	more than 1000	Non	more than 600	Moto/50%	Good		10000	50		-	Y	per Bucket	100	5-20	Non	Non	-	Existent
65	Marti	460	1,937	460	Jemps	Rural	Non	Non	612	0	79	22	33	River		0.0		0.0	5	Impossible	Impossible	Non	500	Existent	600	Moto/50%		Agriculture	8000	50		-	Y	per Bucket	25	5	Non	Non	-	Non
66	Kampi ya Samaki	1,300	1,840	1,300	Tugen	Rural	Dispensary	V. office	0	0	70	7	25	River		0.0		0.0	2	No Good	Impossible	Non	more than 1000	Non	more than 600	Moto	No Good	Livestock	12000	21		-	Y	per Bucket	160	20	Available	Non	-	Non
67	Lesuuwa	350	1,800	187	Jemps	Rural	Non	Field	73	0	97	43	135	River	150	8.3	80.0	4.4	2	Good	Impossible	Non				Non	Good	Livestock/Agricultu	10000			Y	Y				Available	Available	Available	Non
68	Kipchemei	380	1,366	380	Tugen	Rural	Dispensary	V. office	390	0	69	11	50	River		0.0		0.0	2	Good	Good	Non				Moto	No Good	Livestock	12000			Y	Y			20	Arid Lands	Available	Available	Existent
69	Kapkechii	290	4,260	290	Tugen	Rural	Dispensary	V. office	395	0	20	22	90	River		0.0	500.0	11.7	2	Good	No Good	Non				Moto	No Good	Livestock	12000	50		-	Y	per Bucket	500	20	Available	Non	-	Existent
70	Loropil	370	2,388	370	Jemps	Rural	Non	Non	539	0	83	4	23		428	17.9		0.0	1	No Good	Impossible	Non	more than 1000	Non	more than 600	Non	Good	None	10000	50		-	Y	per Bucket	330	50	Latiff	Non	-	Existent
72	Kimalel Hospital	380	969	380	Tugen	Semi urban	ealth Cente	V. office	0	0	78	4	33	River/Dugwell		0.0		0.0	1	Good	Good	Non	more than 1000			Tus	Good	Livestock	12000	50		Y	Y	per Bucket	75	3-5	Available	Non	Available	Non
73	Kisamisonchun	300	969	300	Tugen	Rural	Non	V. office	408	0	69	3	40			0.0		0.0		Good	No Good	Non				Non	No Good	Livestock	12000	50		–	Y	per Bucket	500	3-4	Available	Non	-	Existent
74	Lokolwopsonchun	270	969	270	Tugen	Rural	Non	Non	200	0	65	7	40	River		0.0		0.0	1	Good	No Good	Non				Non	No Good	Livestock	12000	50		-	Y	per Bucket	500	5-20		Non	-	Non
75	Kinyach	320	1,366	320	Tugen	Rural	Non	Non	356	0	85	11	40	River		0.0	500.0	36.6	2	Good	No Good	Non				Non	Good	Livestock	12000	50		Y	Y	per Bucket	500	3	Non	Available	Available	Non
77	Tirng'ongwonin	350	1,146	350	Tugen	Rural	Non	V. office	125	0	41	11	100	River		0.0		0.0	2	Good	No Good	Non				Moto	No Good	Livestock	12000	50		-	-	per Bucket	500	25		Non	-	Existent
78	Kibingor	450	695	450	Tugen	Semi urban	Non	V. office	240	0	97	7	40	River		0.0		0.0	2	Good	No Good	Non	100			Moto	No Good	Livestock	12000	50		Y	Y	per Month	500		Latiff	Available	No	
79	Wokerben	400	689	450	Tugen	Semi urban	Non	V. office	120	0	86	15	30	River		0.0		0.0	1	Good	No Good	Non	500	Non	600	Moto	No Good	Livestock	12000	50		Y	Y	per Month	500		Latiff	Available	No	
81	Kabusa	600	794	600	Tugen	Rural	Non	V. office	279	0	90	40	190	River		0.0		0.0	1	Good	No Good	Non				Moto	No Good	Livestock	12000			-	Y	per Bucket		20		Non	-	Existent
82	Barsemoi	500	1,366	500	Tugen	Rural		V. office	159	0	80	8	33			0.0		0.0	1	Good	No Good	Non				Moto		Livestock	12000	50		Y	Y	per Bucket	500	20	Latiff	Available	-	Existent
83	Kiwanja Ndege	340	1,059	340	Endorois	Rural			110	0	50	20	75	River	60	5.7		0.0	1			Three Ph	1000	Non	more than 600		Good					-	-				-	-	
84	Chelaba	460	1,086	400	Endorois	Rural	Non	Field	450	50	85	25	22	River		0.0		0.0	2	No Good	No Good	Non	more than 1000	Non	more than 600	Moto/regular	Good	Livestock/Agricultu	10000	45		Y	Y				Available	Available	No	Non
85	Chepkotoiyan	370	1,300	370	Endorois	Rural	Non	Field	192	0	95	10	40	River		0.0		0.0	5	Good	No Good	Non	100	Existent	100	Moto	No Good	Livestock/Agricultu	10000	50		Y	Y	per Bucket	75	20	Available	Available	Available	Existent
86	Samuran	450	1,300	450	Endorois	Rural	Non	Non	140	0	80	7	30	River	40	3.1	20.0	1.5	5	Good	No Good	Non	more than 1000	Non	more than 600	Non	Good	Livestock/Agricultu	10000	25		-	Y	per Bucket	100	20	Available	Non	-	Non
87	Mosuro	340	578	340	Tugen	Rural	Non	V. office	310	0	91	15	18	River		0.0		0.0	1	Good	Good	Non	more than 1000	Non	more than 600	PSV	Good	Livestock	10000	40		-	Y	per Month	60	20		Non	-	Non
88	Logumgum	340	3,000	900	Jemps	Rural	Non	Non	0	0	98	6	9	River		0.0		0.0	more than 5	No Good	Impossible	Non	more than 1000	Non	more than 600		Good	Others	10000	40		-	Y	per Bucket	250	22	Non	Non	-	Non
89	Mochongoi centre	650	1,552	402	Tugen	Rural	Dispensary	V. office	432	0	87	10	13	River		0.0	#####	64.4	0.2	Good	Good	Non	more than 1000	Non	more than 600	PSV	Good	Livestock/Agricultu	10000	50		-	Y	per Bucket	25	2	Available	Non	-	Existent
90	Kapkechir	600	4,260	640	Tugen	Rural	Dispensary	V. office	773	0	84	23	35	River	249	5.8		0.0	0.2	Good	Good	Non	more than 1000	Non	more than 600	PSV	Good	Livestock	12000	40		-	-	per Bucket	25	2	Available	Non	-	Existent
92	Kipkandule	500	1,278	500	Tugen	Rural	Dispensary	Non	420	0	85	40	60	Dugwell	157	12.3		0.0	1	Good	No Good	Non	more than 1000	Non	more than 600	PSV	No Good	Livestock/Agricultu	10000	50		Y	Y	per Bucket	25	1-2	Available	Available	Available	Existent
94	Sambaka	350	3,794	450	Tugen	Rural	ealth Cente	Field	287	0	96	33	50	River	551	14.5		0.0	0.2			Non	more than 1000	Non	more than 600	PSV	Good	Livestock/Agricultu	10000	50		-	Y	per Bucket	25	2	Available	Non	-	Existent
95	Nyalilbuch	280	1,942	518	Tugen	Rural	Non	Chief	219	195	37	20	50	River	592	30.5		0.0	1	Impossible	Impossible	Non	more than 1000	Non	more than 600	PSV	Good	Livestock	12000	50		-	Y	per Bucket	340	2	Non	Non	-	
96	Sokonin	270	2,853	270	Tugen	Rural	Dispensary	V. office	612	0	86	15	50	River	482	16.9		0.0	1	No Good	No Good	Non	more than 1000	Non	more than 600	PSV	Good	Livestock	12000	50		-	Y	per Bucket	25	2	Available	Available	-	Existent

NO	Site/Village Name	Pop. Served	village Population	Site Population	Ethnic Tribe	Village Type	Medical facilities	Public MTG place	Day school students	Boarding school students	% of school children	Average nr of Cattles per household	Average nr of Sheep per household	Water source	Diarrhea	% population ratio	Typhoid	% population ratio	Dry season Distance to water (km)	Vehicle accessibility (Dry Season)	Vehicle accessibility (Rain Season)	Electricity	Distance to electricity (m)	Transformer	Distance to transformer (m)	Public transport	Mobile antenne	Primary industry	Average household monthly income (ksh)	Water consumption	発電機	Willingness to join WSP/RVWSB	Willingness to form VHWC	Payment method preferable	Daily water payable for domestic Use	Price of Water per 20 litters by survey	CDF	Availability of water committee	Availability of repairman	Activities of NGOs for water supply
97	Partalo	480	2,853	490	Tugen	Rural	Dispensary	Field	0	0	70	12	28	River	482	16.9		0.0	1	Good	Good	Non	more than 1000	Non	more than 600	PSV	No Good	Livestock	12000	46		-	Y	per Bucket	25	2	Non	Non	-	Existent
98	Menmeno	570	1,110	570	Tugen	Rural	Dispensary	Field	176	0	85	10	23	River	274	24.7		0.0	1	No Good	Impossible	Non	more than 1000	Non	more than 600	PSV	Good	Livestock	12000	50		-	-	per Month	25	2			-	
101	Kaptara	610	950	600	Tugen	Rural	Non	Field	288	0	60	10	25	River	262	27.6		0.0	2	Good	No Good	Three Ph	1000	Existent	more than 600	Moto	Good	Livestock/Agricultu	10000	33		Y	Y	Don't like today	290	20	Available	Available	No	Non
102	Kipsoit Primary	890	1,766	500	Tugen	Rural	Non	Field	598	0	79	18	43	River	262	14.8		0.0	more than 5	Good	Good	Three Ph	500	Existent	600	Moto/PSV	Good	Livestock/Agricultu	10000	11		Y	Y	Don't like today	460	20-30	Available	Available	Available	Non
103	Kakwane	1,300	1,590	1,300	Tugen	Rural	Non	Field	128	41	23	12	27	River	262	16.5		0.0	3	Good	No Good	Three Ph	more than 1000	Non		Moto/PSV	Good	Livestock/Agricultu	10000	18		Y	Y	Don't like today	370	5-30	Available	No	Available	Non
104	Salawa Hospital	1,200	1,692	1,180	Tugen	Semi urban	ealth Cent	Field	0	0	80	5	17	River	262	15.5		0.0	1	Good	Good	Three Ph	500	Existent	600	Moto/PSV	Good	Livestock/Agricultu	10000	25		Y	Y	Don't like today	200	5-10		Available	Available	Non
105	Salawa Primary	900	1,692	930	Tugen	Semi urban	ealth Cent	Field	0	821	78	8	28	River	262	15.5		0.0	1	Good	Good	Three Ph	500	Existent	600	Moto/PSV	Good	Livestock/Agricultu	8000	27		Y	Y	Don't like today	75	10-25	Available	Available	Available	Non
106	Eron Primary	870	1,200	700	Tugen	Rural	ealth Cent	Field	210	0	50	7	15	River	262	21.8		0.0	1	Good	Good	Three Ph	500	Existent	600	Moto/PSV	Good	Livestock/Agricultu	8000	50		-	Y	Don't like today	380	10-30	Available	Available	-	Non
107	Kimoso	500	1,200	540	Tugen	Rural	Non	Field	205	0	97	6	18	River	262	21.8		0.0	2	Good	Good	Non	more than 1000			PSV	Good	Livestock/Agricultu	8000	50		Y	Y	don't like today	300	15-40		Available	No	Non
108	Saonin	560	1,200	500	Tugen	Rural	ealth Cent	Field	0	0	70	7	15	River	262	21.8		0.0	1	No Good	No Good	Non	more than 1000	Existent	more than 600	Non	Good	Livestock/Agricultu	8000	40		-	Y	Don't like today	360	20-30	Non	Non	-	Non
109	Oinobmoi centre	1,300	2,088	1,343	Tugen	Semi urban	Dispensary	Field	562	470	100	8	25	River	10	0.5		0.0	1	Good	Good	Three Ph	100	Existent	100	Moto/PSV	Good	Livestock	10000	21		Y	Y	Don't like today	180	5-40	Available	Available	No	Non
110	Kapsikoryan	950	1,450	900	Tugen	Rural	Non	Field	185	0	100	2	7	River	10	0.7		0.0	1	Good	Good	Three Ph	more than 1000	Non		PSV	Good	Livestock/Agricultu	8000	17		Y	Y	Don't like today	150	20	Available	Available	No	Non
111	Kurumbopsoo	800	745	800	Tugen	Semi urban	Dispensary	V. office	240	0	86	9	15	River	360	48.3	150.0	20.1	3	Good	No Good	Non		Non		Moto/PSV	Good	Livestock	10000			Y	Y			0	Available	Available	No	Non
112	Sironoi	500	1,450	500	Tugen	Rural	Non	Field	175	0		7	18	River	10	0.7		0.0	1	Good	Good	Three Ph	1000	Non		PSV	Good	Livestock/Agricultu	8000	33		Y	Y		220	15-20	Available	Available	No	Non
113	Kasitet	810	776	810		Rural	Non	Siginwa	240	0	90	13	20		360	46.4	150.0	19.3		Good	No Good					Moto/PSV	Good	Livestock/Agricultu	8000			-	Y				Available	Non	-	Non
114	Sichei	570	1,160	350	Tugen	Semi urban	Dispensary	V. office	0	0	28	5	15	River	360	31.0	150.0	12.9	1	Good	No Good	Non		Non		Moto/PSV	Good	Livestock	10000			Y	Y			30		Non	No	Non
115	Kisok	380	745	250	Tugen	Semi urban	Dispensary	V. office	165	0	87	11	26	River	360	48.3	150.0	20.1	2	Good	No Good	Non		Non		Moto/PSV	Good	Livestock	10000			-	Y				Available	Non	-	Non
116	Katunoi	400	493	400	Tugen	Semi urban	Dispensary	school	187	0	95	11	26	River	50	10.1	20.0	4.1	3	Good	No Good	Non		Non		Moto/PSV	Good	Livestock	10000			Y	Y				Available	Available	No	Non
117	Saimet	300	397	300	Tugen	Semi urban	Non	V. office	140	0	100	10	15		50	12.6	20.0	5.0	3	Good	No Good	Non	more than 1000	Non		Moto	Good	ock/Agriculture/Fi	8000			Y	Y				Available	Available	No	Non
118	Kwamkeiyon	350	705	350	Tugen	Rural	Non	school	283	0	88	5	15	River		0.0		0.0	2	No Good	No Good	Non		Non		Moto	No Good	Livestock/Agricultu	8000			-	Y				Available	Available	-	Non
119	Chepkero Primary	450	704	450	Tugen	Rural	Dispensary	Field	200	0	100	11	15		48	6.8	30.0	4.3	0.2	Impossible	Impossible	Three Ph	more than 1000	Existent	more than 600	Non	Fair	Agriculture	6000	8		Y	Y	per Bucket	175	20	Available	Non	-	Non
120	Mogorwa	1,200	1,221	360	Tugen	Semi urban	Dispensary	V. office	275	400	58	30	30	River	100	8.2	60.0	4.9	3	Good	No Good	Single Ph	500	Non	more than 600	Moto/PSV	No Good	Livestock	10000			Y	Y			100/month		Available	Available	Non
121	Kisonei Primary	1,100	1,300	400	Tugen	Semi urban	Dispensary	V. office	473	0	99	9	20	River	12	0.9	30.0	2.3	5	Good	No Good	Non	more than 1000	Non	more than 600	Moto/PSV	Good	Livestock	10000			Y	Y				Available	Available	No	Non
122	Ochii Primary	600	615	650	Tugen	Semi urban	Dispensary	V. office	316	0	92	7	5	River		0.0		0.0	1	No Good	No Good	Non	500	Non		Moto/PSV	No Good	Livestock/Agricultu	8000			Y	Y				Available	Available	No	Non
123	Siginwo	800	800	990		Rural	Non	Siginwo	190	0	35	4	4		400	50.0	300.0	37.5		Good	No Good	Non	more than 1000	Non	more than 600	Moto/PSV	Good	Livestock/Agricultu	8000			-	Y			20-30	Available	Non	-	Non
124	Tabarin	660	1,189	700	Tugen	Rural	ealth Cent	V. office	212	620	35	3	4	River		0.0		0.0	0.2	Good	No Good	Single Ph	100	Existent	600	Moto/PSV	Good	Livestock/Agricultu	8000	50		-	Y	Don't like today	100	20-30	Available	-	-	Non
125	Tuluongoi	760	374	724	Tugen	Rural	Non	V. office	350	200	83	6	9	River		0.0		0.0	1	Good	No Good	Three Ph	more than 1000	Existent	600	Moto/PSV	No Good	Livestock	10000			-	Y	per Bucket		20-30	Available	Non	No	Non
126	Tebei	600	907	829	Tugen	Rural	Dispensary	V. office	400	0	77	6	6	River	60	6.6	70.0	7.7	3	Good	No Good	Non	more than 1000	Non	more than 600	Moto	No Good	Livestock	10000	50		-	Y	per Bucket	100	20-30	Available	Available	Available	Non
127	Ilyakat	500	1,465	376	Tugen	Rural	Non	V. office	150	0	80	4	4	River		0.0		0.0	more than 5	No Good	Impossible	Non	more than 1000	Non	more than 600	Moto	Fair	Livestock	10000	50		-	Y	per Bucket	250	20	Non	Non	-	
128	Katkamuma	400	907	192	Tugen	Rural	Non		288	0	80	7	7	River/Spring		0.0		0.0	2	Good	No Good	Non	more than 1000	Non	more than 600	Moto	No Good	Livestock	10000	50		-	-	per Bucket	290	20-30	Non	-	-	Non
129	Tinomoi	370	1,744	886	Tugen	Rural	Non	Non	142	0	36	16	25	River	60	3.4	50.0	2.9	3	Good	No Good	Non	more than 1000	Non	more than 600	Moto	Good	Livestock	10000	50		Y	Y	per Bucket	170	20-30	Available	Available	No	Existent
130	Timboiywo	1,300	1,885	1,300	Tugen	Rural	Non	V. office	689	0	91	3	5	River		0.0		0.0	2	Good	Good	Non	more than 1000	Non	more than 600	PSV	Good	Agriculture	6000	30		-	-	per Bucket	50	20		Non	-	Existent
131	Kabasis	1,500	4,027	1,500	Tugen	Rural	Non	V. office	1207	0	80	3	4	River	150	3.7	5.0	0.1	3		No Good	Single Ph	more than 1000	Non		PSV	No Good	Agriculture	6000	30		-	Y	per Bucket	40	3-15	Latiff	Non	-	Non
133	Kapchomuswo Sec	900	2,041	300	Tugen	Rural	Dispensary	Field	1300	140	92	5	28		3000	147.0		0.0	5	Impossible	Impossible	Single Ph	1000	Existent	more than 600	Non	Fair	Agriculture	6000	11		-	Y	per Bucket	220	20-30	Available	Non	-	Non
134	Kiwanja Ndege	450	2,041	450	Tugen	Rural	Dispensary	Field	300	0	40	5	11		3000	147.0		0.0	0.2	Impossible	Impossible	Three Ph	more than 1000	Existent	more than 600	Non	Fair	Agriculture	6000	8		-	Y	per Bucket	180	20	Available	Non	-	Non
135	Pemwai centre	800	2,041	436	Tugen	Rural	Non	Field	250	750	49	7	25	Spring	62	3.0		0.0	1	Good	Good	Single Ph	1000	Existent	more than 600	PSV	Fair	Agriculture	6000	12		-	Y	per Bucket	310	20	Available	Available	No	Non
136	Talai	1,400	3,680	1,300	Tugen	Rural	ealth Cent	V. Hall	500	1440	80	7	10		5000	135.9		0.0	0.2	Fair	No Good	Single Ph	100	Existent	600	PSV	Fair	Livestock/Agricultu	8000	9		Y	Y	per Bucket	210	20	Available	Non	-	
137	Kapkawa	1,200	1,657	260	Tugen	Rural	ealth Cent	Field	1660	250	75	6	8		5000	301.8		0.0	0.2	No Good	Impossible	Single Ph	500	Existent	more than 600	PSV	Good	Agriculture	6000	12		Y	Y			20		Available	No	Non
139	Serei	1,400	3,500	400	Tugen	Rural	Dispensary	Field	980	0	84	7	9		5000	142.9		0.0	3	Fair	No Good	Non	more than 1000	Non	more than 600	Non	Good	Livestock/Agricultu	8000	12		Y	Y	per Bucket	250	20	Non	Non	-	Non
140	Turupkir	300	1,068	300	Tugen	Rural	Non	V.office	354	0	86	7	6	River		0.0		0.0	2	Good	Good	Non	more than 1000	Non	more than 600	PSV	Good	Livestock/Agricultu	8000	47		-	-	per Month	50	20		Non	-	Existent
141	Lalwasoyen	280	1,520	280	Pokot	Rural	Dispensary	V.office	450	0	69	13	15	River/Dugwell	198	13.0	4.0	0.3	1	Impossible	Impossible	Single Ph	1000	Existent	more than 600	Moto	No Good	Livestock	10000	25		-	N	Don't like to		10	Non	Non	-	Existent
143	Kiliwok	270	769	270	Pokot	Rural	Non	Non	0	140	93	25	40	Dugwell		0.0		0.0	3	No Good	No Good	Non		Non		PSV	Good	Livestock	10000	25		-	Y				Non	Non	-	Non
144	Lomuyek	370	769	370	Pokot	Rural	Dispensary	Non	201	0	67	4	22	River/Spring		0.0		0.0	3	No Good	No Good	Non				PSV	No Good	Livestock	10000	30		-	Y			20	Non	Non	-	Non
145	Nakolete	290	769	290	Pokot	Rural	Non	Non	0	0	60	10	25	Spring/Dugwell		0.0		0.0	3	Impossible	Impossible	Non		Non		Non	NA	Livestock	10000	18		-	Y	per Bucket	140	50-100	Non	Available	No	Existent
146	Kalapata	200	2,270	200	Tugen	Rural	Non	Non	200	120	80	5	25	River/Spring		0.0		0.0	5	No Good	No Good	Non		Non		Non	No Good	Livestock	10000	35		-	Y				Non	Non	No	
148	Orus	350	2,929	350	Pokot	Rural	Non	Non	320	0	40	3	22	River/Spring		0.0		0.0	more than 5	No Good	No Good	Non				Non	No Good	Livestock	10000	42		-	-				Non	Non	-	Existent
149	Siria	250	1,164	330	Pokot	Rural	Non	Non	310	0	67	27	40	Spring/Dugwell		0.0		0.0	2	No Good	Impossible	Single Ph	1000	Non	more than 600	PSV	No Good	Livestock	10000	50		-	Y	Don't like today		15	Non	Non	-	Existent
150	Katungura	500	1,345	?	Pokot	Rural	Clinic	Non	180	0	24	10	22	River/Spring		0.0		0.0	2	No Good	No Good	Non				Non	No Good	Livestock	10000	45		-	Y	per Bucket	160	20	Non	Non	No	Existent
151	Tuwo	200	866	522	Pokot	Rural	Non	Field	200	0	30	20	70			0.0		0.0	3	No Good	No Good	Non				Non	Good	Livestock	10000	28		Y	Y	Don't like today	25		Non	Available	Available	Non
152	Lemuyek	250	750	700	Pokot	Rural	Non	Non	37	0	82	18	40	River		0.0		0.0	0	No Good	No Good	Non	more than 1000	Non	more than 600	PSV	No Good	Livestock	10000	19		-	Y				Available	Available	Available	Non
153	Chebilat	500	750	700	Pokot	Rural	Non	Non	250	0	63	10	65	River/Dugwell		0.0		0.0	1	No Good	Impossible	Non	1000	Existent	more than 600	PSV	No Good	Livestock	10000			-	Y				Non	Non	-	Existent
154	Riongo	600	4,156	600	Pokot	Rural	ealth Cent	V.office	59	0		13	22	River/Dugwell	281	6.8		0.0	2	Impossible	Impossible	Non		Non		Non	No Good	Livestock	10000	40		-	Y	per Bucket	80	20-30	Non	Non	-	Existent
155	Naudo	700	1,600	700	Tugen	Rural	Drug Store	V.office	300	0	79	20	35	River/Dugwell	198	12.4	1.0	0.1	3	No Good	Impossible	Non	more than 1000	Non	600	Moto	No Good	Livestock	10000	40		-	Y	per Bucket	210	6-30	Available	-	-	Existent
156	Akwichatis	1,050	2,647	1,050	Pokot	Rural	Clinic	V.office	155	0	44	25	45	River	255	9.6	5.0	0.2	more than 5	No Good	No Good	Non	more than 1000	Non	more than 600	Moto	Fair	Livestock	10000	13		-	Y	per Bucket	60	6-15	Non	Non	-	Non
157	Nasorot	980	5,651	980	Pokot	Rural	Dispensary	V.office	319	0	25	22	22	Dugwell	213	3.8	15.0	0.3	2	No Good	No Good	Non	more than 1000	Non	more than 600	Moto	Good	Others	8000	25		-	Y	Don't like today	250	25	Non	Non	-	Non
159	Chepkunoyo	260	5,122	260	Pokot	Rural	Non	Non	1229	0	60	25	25	River/Dugwell	185	3.6	1.0	0.0	1	No Good	Impossible	Single Ph	1000	Existent	more than 600	PSV	No Good	Livestock	10000	25		-	Y	per Bucket	250	9-15	Non	-	-	Existent
160	Kosiokon	700	2,260	700	Pokot	Rural	Drug Store	V.office	122	0	45	30	35	River		0.0		0.0	2	No Good	No Good	Non	more than 1000	Non		Moto	No Good	Livestock	10000	40		-	Y				Non	Non	-	Non
163	Chepturu	500	500	110		Rural	Dispensary	V.office	267	0	76	40	40			0.0		0.0		No Good						Moto	No Good	Livestock	10000			-	-				Available	-	-	
165	Ngoron	900	900	400	Pokot	Rural	Dispensary	V.office	0	357	89	45	50	River		0.0		0.0	2	No Good	Impossible	Non		Non		Moto	Good	Livestock	10000	45		Y	Y				Available	Available	No	Existent
168	Chepelion	240	3,203	150	Pokot	Rural	Non		60	0	60	40	40	River		0.0		0.0	2	No Good	Impossible	Non		Non		Moto	Good	Livestock	10000	25		-	Y				Available	Non	-	Existent
169	Krelion	300	2,929	300	Tugen	Rural	Clinic	V.office	237	0	79	22	45	River/Borehol	120	4.1	3.0	0.1	1	No Good	No Good	Single Ph	more than 1000	Existent	1500	Moto	No Good	Livestock	10000	50		-	Y	per Bucket	460	5-10	Available	-	-	
171	Naminito	520	1,450	520	Pokot	Rural	Clinic	church/sch	157	0	78	20	40	River/Dugwell	250	17.2		0.0	1	No Good	Impossible	Non		Non		Moto	Good	Livestock	10000	40		-	Y	Don't like today				Non	-	Non
176	Komolwo	260	1,375	260	Pokot	Rural	Non	Non	0	0		6	6	River		0.0		0.0	5	No Good	No Good	Non					No Good	Livestock/Agricultu	8000			-	Y				Non	Non	-	Non
178	Lolkos	260	1,088	260	Tugen	Rural	Non	Non	265	0	60	16	25	River/Dugwell		0.0		0.0		No Good	Impossible	Single Ph	500	Existent	more than 600	Non	No Good	Livestock	10000	25		-	Y	Don't like today		8		Non	-	Existent
179	Lomerimeri	360	1,849	360	Pokot	Rural	Non	Non	72	0	48	4	7	River		0.0		0.0	more than 5	No Good	No Good	Non		Non		Moto	No Good	Livestock	10000	40		Y	-				Available	Non	No	Non
181	Katikit	1,050	1,851	1,050	Pokot	Rural	Non	Non	190	0	25	9	25	River/Dugwell		0.0		0.0	3	No Good	No Good	Non		Non		PSV	Good	Livestock	10000	40		Y	Y				Non	Non	No	Existent
182	Chepanda	460	1,600	401	Pokot	Rural	Non	V.office	0	0	20	10	30	River		0.0		0.0	2	Good	Good	Non				Moto	No Good	Livestock	10000			-	Y				Non	Non	-	Non
183	Donge	250	3,632	1,254	Pokot	Semi urban	ealth Cent	V.office	153	1085	73	4	15	River	2761	76.0	57.0	1.6	0.2	Good	No Good	Three Ph	1000	Existent	more than 600	Moto/PSV	Good	Livestock	10000	18		Y	Y	per Bucket	25	2		Available	No	Existent
184	Katukumwo	260	2,000	1,250	Pokot	Rural	Non	V.office	0	0	57	20	30	River		0.0		0.0	2	No Good	No Good	Non				Moto	Good	Livestock	10000	18		-	Y	per Bucket		20-30	Non	Available	-	Non
185	Chesakam	600	658	337	Pokot	Rural	Non	V.office	130	184	40	4	30	Dugwell/Borehole		0.0		0.0	3	Good	No Good	Non				Moto	No Good	Livestock	10000			-	Y			20	Available	Available	-	Non
186	Chesitet	400	1,550	400	Pokot	Rural	Clinic	V.office	350	0	94	7	25	River/Dugwell	290	18.7	10.0	0.6	1	No Good	Impossible	Single Ph	more than 1000	Non		PSV	Good	Livestock	10000	24		-	Y	per Bucket	25	4-10		Non	-	Non
187	Kasakaram	560	2,190	560	Pokot	Rural	Clinic	V.office	165	0	75	22	31	Dugwell	185	8.4		0.0	3	No Good	Impossible	Single Ph	1000	Existent	more than 600	Moto/PSV	Good	Livestock	10000	10		-	Y	per Bucket	25	15-30	Non	Non	-	
190	Maron	960	555	210	Pokot	Rural	Dispensary	V.office	0	137	68	4	10	River	78	14.1	106.0	19.1		Good	Good	Non				Moto	No Good	Livestock	10000			-	Y				Non	Non	-	Non
												17	31																											
Average		81,340														24.0		2.8																				60		

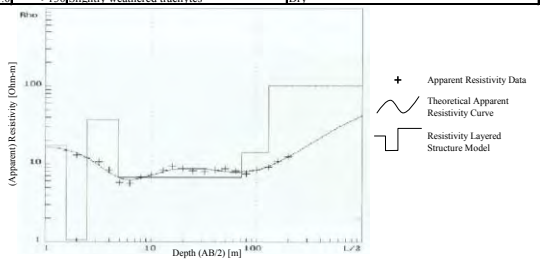
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Barwessa
	Location	Lawan	Site No.	V-2
	Site Name	KONOO PRIMARY SCHOOL	Elevation	1112
36N	UTM-E	798705	UTM-N	75677
	Latitude	0.683944	Longitude	35.683556

AB/2 (m)	Rho-a (Wm)
1.6	14.9
2.0	13.1
2.5	12.0
3.2	10.6
4.0	8.4
5.0	5.8
6.3	5.7
8.0	6.8
10.0	7.3
13.0	8.4
16.0	9.3
20.0	8.7
25.0	8.2
32.0	8.0
40.0	8.3
50.0	8.7
63.0	8.3
80.0	7.6
100.0	8.4
130.0	9.2
160.0	10.9
200.0	12.5



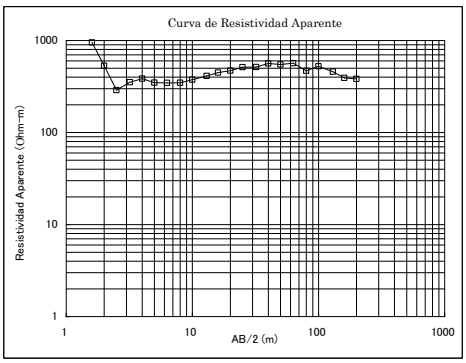
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
17.0	2.0	Dry top superficial layer	Dry. No aquifers
1.0	3.0	Slightly weathered trachytic phonolites.	Moist.
37.0	5.0	Slightly weathered and fractured trachytic phonolites	No significant aquifers
7.0	73.0	Weathered and fractured trachytic phonolites rocks.	Aquiferous layer
14.0	130.0	Fractured and weathered basalts and old surface layer.	Aquiferous. Deep aquifers expected
101.0	>130	Slightly weathered trachytes	Dry



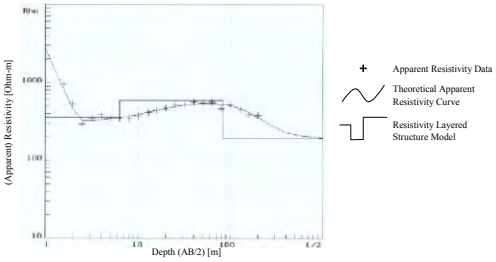
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Barwessa
	Location	Lawan	Site No.	V-3
	Site Name	KORMOR	Elevation	1194
36N	UTM-E	798705	UTM-N	75677
	Latitude	0.634389	Longitude	35.683556

AB/2 (m)	Rho-a (Wm)
1.6	951.4
2.0	532.2
2.5	289.5
3.2	351.8
4.0	385.6
5.0	348.5
6.3	345.8
8.0	347.6
10.0	375.8
13.0	412.5
16.0	448.0
20.0	470.2
25.0	513.5
32.0	515.2
40.0	564.1
50.0	548.3
63.0	567.9
80.0	468.5
100.0	524.0
130.0	458.7
160.0	392.9
200.0	382.4



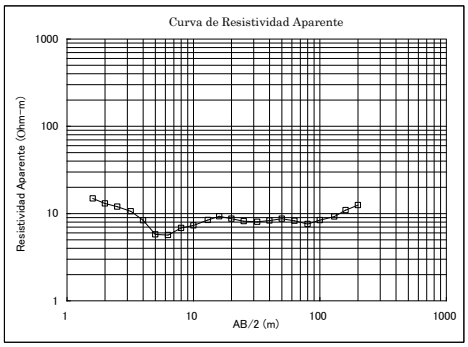
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
9000	0.4	Dry top compact layer	Dry. No aquifers
20	0.5	Slightly weathered trachytic phonolites.	Moist.
358	6.3	Slightly weathered and fractured trachytic phonolites	No significant aquifers
589	82	High resistivity fractured trachytes intercalated with fractured pyroclastics.	Dry
193	>82	Fractured and weathered trachytic phonolites and old land surface layer.	Aquiferous.



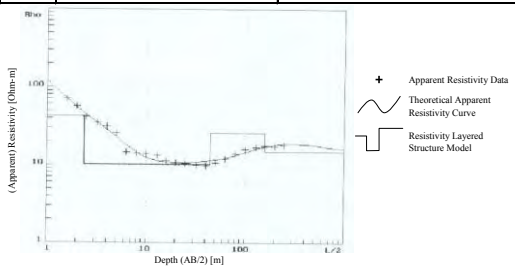
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Barwessa
	Location	Kabutiei	Site No.	V-5
	Site Name	KABULIAK	Elevation	1091
36N	UTM-E	796982	UTM-N	69736
	Latitude	0.63025	Longitude	35.668111

AB/2 (m)	Rho-a (Wm)
1.6	14.9
2.0	13.1
2.5	12.0
3.2	10.6
4.0	8.4
5.0	5.8
6.3	5.7
8.0	6.8
10.0	7.3
13.0	8.4
16.0	9.3
20.0	8.7
25.0	8.2
32.0	8.0
40.0	8.3
50.0	8.7
63.0	8.3
80.0	7.6
100.0	8.4
130.0	9.2
160.0	10.9
200.0	12.5



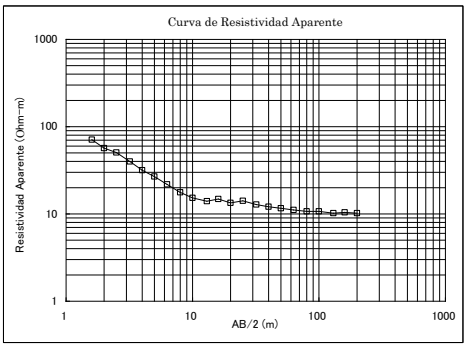
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
214.0	0.5	Dry top superficial layer	Dry. No aquifers
43.0	2.4	Slightly weathered phonolites.	Moist. Not potential for groundwater exploitation.
10.0	44.0	Slightly weathered and fractured trachytic phonolites	No significant aquifers
26.0	159.0	Weathered and fractured trachytic phonolites.	Aquiferous layer
15.0	>159	Highly Fractured and weathered basalts and old surface layer.	Aquiferous. Deep aquifers expected



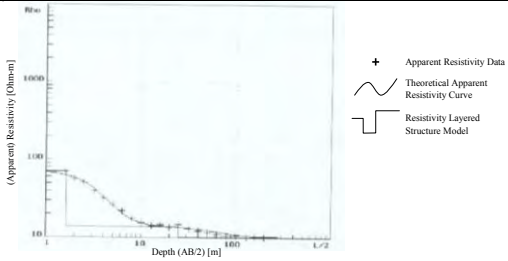
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Barwessa
	Location	Kabutiei	Site No.	V-6
	Site Name	KAMNOROCK	Elevation	1066
36N	UTM-E	793300	UTM-N	69768
	Latitude	0.630556	Longitude	35.635028

AB/2 (m)	Rho-a (Wm)
1.6	71.0
2.0	56.7
2.5	50.5
3.2	39.9
4.0	31.7
5.0	26.8
6.3	21.8
8.0	17.7
10.0	15.3
13.0	14.0
16.0	14.8
20.0	13.4
25.0	14.1
32.0	12.8
40.0	12.1
50.0	11.6
63.0	11.1
80.0	10.7
100.0	10.7
130.0	10.2
160.0	10.4
200.0	10.2



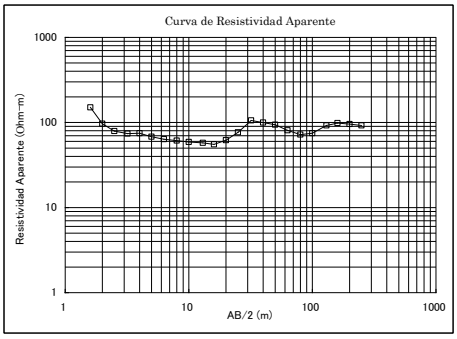
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
71.0	2.0	Dry top superficial layer	Dry. No aquifers
14.0	25.0	Slightly weathered phonolites.	Moist. Very thin aquifer layer. No potential for groundwater exploitation.
10.0	>25	Highly weathered and fractured phonolites	Significant aquifers expected below this layer



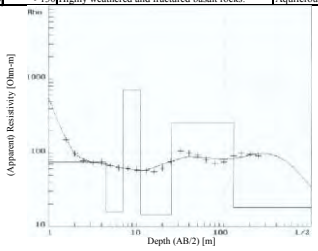
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Kipsaraman
	Location	Kaboskei	Site No.	V-7
	Site Name	CHIMODOI	Elevation	1693
36N	UTM-E	810450	UTM-N	88345
	Latitude	0.798333	Longitude	35.789111

AB/2 (m)	Rho-a (Wm)
1.6	150.3
2.0	96.8
2.5	79.2
3.2	74.1
4.0	74.8
5.0	68.1
6.3	63.5
8.0	61.2
10.0	59.0
13.0	57.6
16.0	55.4
20.0	61.9
25.0	76.6
32.0	105.6
40.0	99.7
50.0	94.1
63.0	80.8
80.0	72.1
100.0	74.8
130.0	92.4
160.0	98.4
200.0	95.9
250.0	92.2



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
2835.0	0.3	Dry and compacted top superficial layer	Dry. No aquifers
75.0	4.5	Slightly weathered phonolites.	Moist.
16.0	7.0	Slightly weathered and fractured phonolites	No significant aquifers
717.0	11.0	Fresh phonolites rocks	Dry. No aquifers
15.0	25.0	Fractured and weathered phonolites and old land surface layer.	Aquiferous. Shallow aquifers expected
257.0	130.0	Fresh phonolite rocks	Dry. No aquifers
18.0	>130	Highly weathered and fractured basalt rocks.	Aquiferous layer. Water strikes expected in this layer.

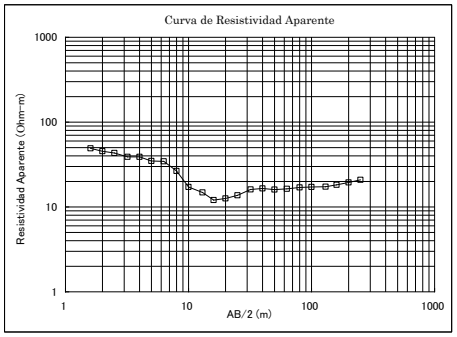


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

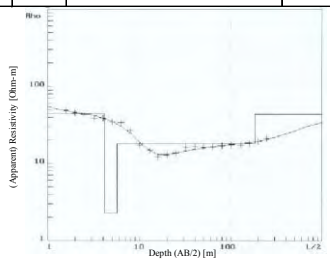
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Kipsaraman
	Location	Kaboskei	Site No.	V-10
	Site Name	MOIGUTWA	Elevation	1713
36N	UTM-E	811929	UTM-N	86084
	Latitude	0.777917	Longitude	35.802361

AB/2 (m)	Rho-a (Wm)
1.6	49.0
2.0	45.4
2.5	43.2
3.2	38.9
4.0	38.9
5.0	34.9
6.3	34.5
8.0	26.6
10.0	17.2
13.0	14.8
16.0	12.1
20.0	12.6
25.0	13.7
32.0	16.1
40.0	16.5
50.0	16.0
63.0	16.3
80.0	17.0
100.0	17.2
130.0	17.3
160.0	18.2
200.0	19.4
250.0	20.9



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
93	0.3	Dry top superficial layer	Dry. No aquifers
44	4	Slightly weathered pyroclastics mainly tuffs.	Moist. Very thin aquifer layer.
2.5	6	Slightly weathered and fractured phonolites	No significant aquifers
18	85	Highly weathered and fractured phonolites.	Aquiferous layer
43	>85	Fractured and weathered phonolites and old surface layer.	Aquiferous. Deep aquifers expected

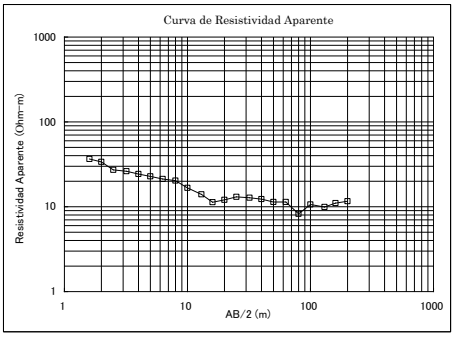


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

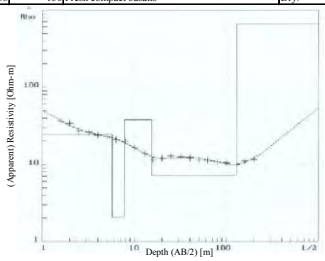
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Barwessa
	Location	Kaboskei Kerio	Site No.	V-11
	Site Name	KAPTIGIT	Elevation	1035
36N	UTM-E	796072	UTM-N	93193
	Latitude	0.842222	Longitude	35.660028

AB/2 (m)	Rho-a (Wm)
1.6	36.5
2.0	33.8
2.5	27.2
3.2	26.2
4.0	24.3
5.0	22.8
6.3	21.2
8.0	20.3
10.0	16.7
13.0	14.0
16.0	11.3
20.0	12.1
25.0	13.1
32.0	12.8
40.0	12.3
50.0	11.4
63.0	11.4
80.0	8.2
100.0	10.6
130.0	9.9
160.0	11.1
200.0	11.6



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
70	0.5	Dry top superficial layer	Dry. No aquifers
25	6	Slightly weathered pyroclastic mainly the tuffs	Moist. No potential for groundwater exploitation.
2	8	Clay layers	No significant aquifers
38	15	Slightly weathered and fractured phonolites	No significant aquifers
7	130	Fractured and weathered basalts and old surface layer.	Aquiferous.
658	>130	Fresh compact basalts	Dry.

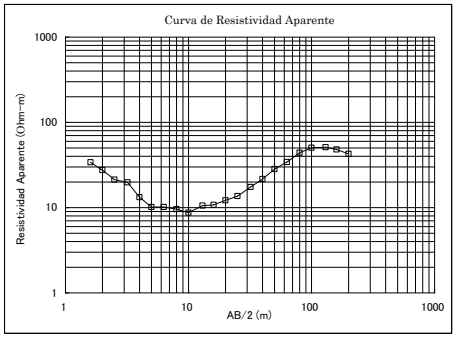


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

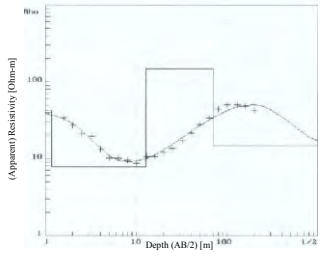
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Barwessa
	Location	Kaboskei Kerio	Site No.	V-12
	Site Name	AYATIA PRIMARY SCHOOL	Elevation	1044
36N	UTM-E	795847	UTM-N	98470
	Latitude	0.889917	Longitude	35.658056

AB/2 (m)	Rho-a (Wm)
1.6	34.0
2.0	27.6
2.5	21.3
3.2	19.8
4.0	13.2
5.0	10.2
6.3	10.2
8.0	9.6
10.0	8.7
13.0	10.6
16.0	10.8
20.0	12.2
25.0	13.6
32.0	17.5
40.0	21.7
50.0	28.3
63.0	34.2
80.0	44.0
100.0	50.3
130.0	51.2
160.0	48.0
200.0	42.7



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
42	1.2	Dry top superficial layer	Dry. No aquifers
8	13	Slightly weathered tuffs.	Moist.
150	70	Compact basalts	Shallow aquifer expected in this zone
15	>70	Highly weathered basaltic rocks.	Aquiferous layer

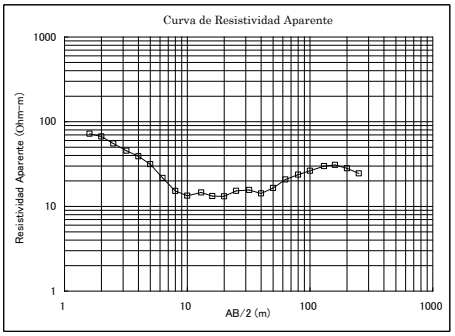


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

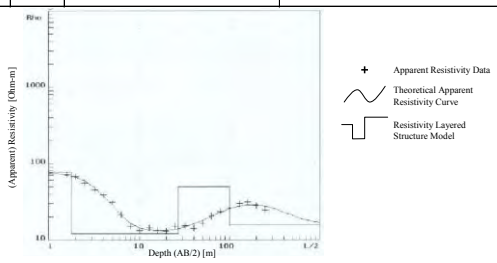
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Barwessa
	Location	Kaboskei Kerio	Site No.	V-13
	Site Name	MAREGUT PRIMARY	Elevation	1069
36N	UTM-E	799959	UTM-N	95748
	Latitude	0.865278	Longitude	35.694972

AB/2 (m)	Rho-a (Wm)
1.6	72.0
2.0	66.8
2.5	55.3
3.2	45.4
4.0	39.0
5.0	31.6
6.3	21.6
8.0	15.2
10.0	13.4
13.0	14.6
16.0	13.3
20.0	13.1
25.0	15.2
32.0	15.6
40.0	14.2
50.0	16.5
63.0	20.8
80.0	23.7
100.0	26.4
130.0	29.9
160.0	30.9
200.0	28.2
250.0	24.5



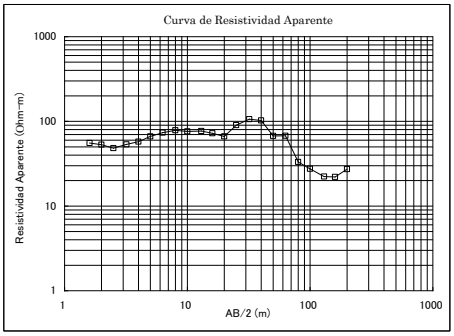
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
78	2	Dry top superficial layer	Dry. No aquifers
12	27	Slightly weathered trachytes and phonolitic trachytes.	Moist. Very thin aquifer layer. Not potential for groundwater exploitation.
50	100	Slightly weathered and fractured phonolites	Shallow aquifer expected in this zone
16	>100	Highly weathered and fractured phonolites.	Aquiferous layer



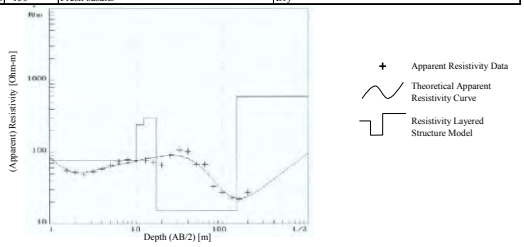
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Kipsaraman
	Location	Kapteberewo	Site No.	V-15
	Site Name	KAPAMIN	Elevation	2217
36N	UTM-E	815264	UTM-N	79507
	Latitude	0.718444	Longitude	35.832278

AB/2 (m)	Rho-a (Wm)
1.6	55.6
2.0	53.1
2.5	48.3
3.2	53.4
4.0	57.6
5.0	66.4
6.3	73.5
8.0	78.4
10.0	76.1
13.0	76.9
16.0	72.3
20.0	66.4
25.0	90.2
32.0	105.9
40.0	102.4
50.0	67.4
63.0	67.6
80.0	33.2
100.0	27.5
130.0	22.3
160.0	22.1
200.0	27.2



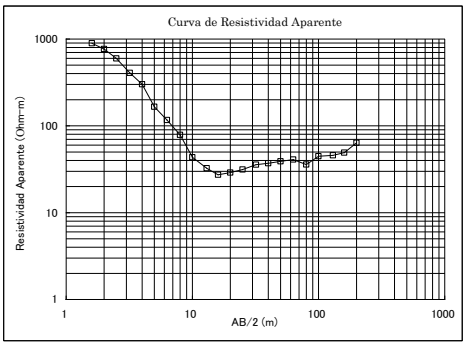
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
159	0.5	Dry top superficial layer	Dry. No aquifers
22	1	Slightly weathered tuffaceous material	Moist. Very thin aquifer layer. Not potential for groundwater exploitation.
76	10	Slightly weathered and fractured pyroclastics	No aquifer expected in this zone
238	12	Dry slightly fractured trachytes	Dry
300	17	Fresh volcanic rocks	Dry
15	150	Highly weathered and fractured trachytes	Aquiferous layer
595	>150	Fresh basalts	Dry



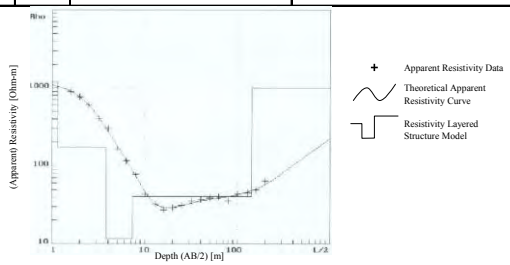
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Kipsaraman
	Location	Kapteberewo	Site No.	V-17
	Site Name	CHAMBAI PRIMARY	Elevation	2046
36N	UTM-E	813363	UTM-N	76213
	Latitude	0.688667	Longitude	35.815167

AB/2 (m)	Rho-a (Wm)
1.6	893.0
2.0	768.2
2.5	597.8
3.2	406.6
4.0	301.5
5.0	165.7
6.3	116.4
8.0	78.8
10.0	43.5
13.0	32.5
16.0	27.3
20.0	29.0
25.0	31.4
32.0	35.7
40.0	37.0
50.0	39.0
63.0	40.9
80.0	35.9
100.0	44.7
130.0	45.8
160.0	49.2
200.0	63.8



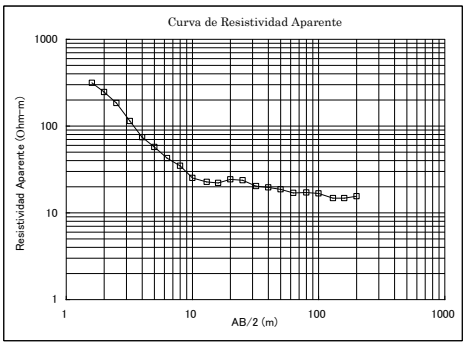
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
1197	1.2	Dry top superficial layer	Dry. No aquifers
174	4	Dry volcanic soils	Dry
12	7	Slightly weathered and fractured pyroclastics	No aquifer expected in this zone
41	141	Highly weathered and fractured phonolites.	Aquiferous layer
1000	>141	Compact and crystalline basalts	Dry



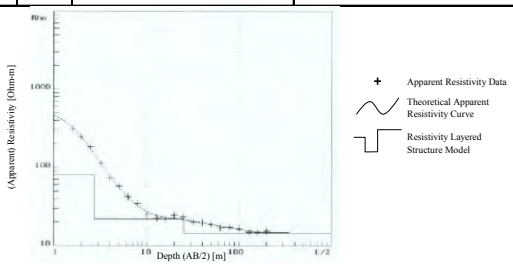
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Kipsaraman
	Location	Kipkata	Site No.	V-19
	Site Name	BARKETIEN PRIMARY	Elevation	1253
36N	UTM-E	817864	UTM-N	87293
	Latitude	0.788778	Longitude	35.855611

AB/2 (m)	Rho-a (Wm)
1.6	315.1
2.0	246.6
2.5	184.1
3.2	114.3
4.0	74.1
5.0	57.3
6.3	42.7
8.0	34.8
10.0	25.2
13.0	22.7
16.0	22.1
20.0	24.3
25.0	23.7
32.0	20.3
40.0	19.6
50.0	18.7
63.0	17.0
80.0	17.2
100.0	16.7
130.0	14.8
160.0	14.8
200.0	15.6



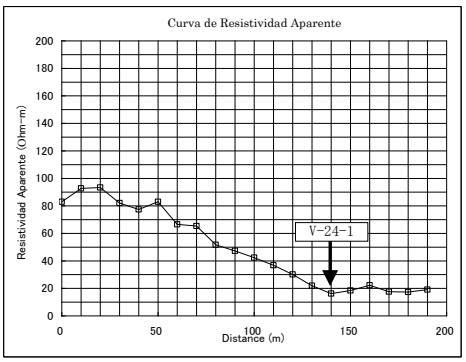
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
576	0.8	Dry top superficial layer	Dry. No aquifers
80	3	Slightly weathered phonolites.	Moist.
22	25	Slightly weathered and fractured phonolites	Shallow aquifer expected in this zone
14	>25	Highly weathered and fractured phonolites.	Aquifers expected below these layers.



Horizontal Electric Profiling Datasheet (Wenner)

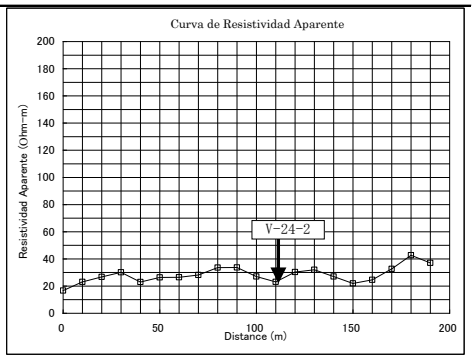
	District	Baringo North	Division	Bartabwa
	Location	Kinyach	Site No.	HEP-24-1
	Site Name	TOBOROI	Elevation	1453
Start Point	Latitude	0.882611	Longitude	35.794083
End Point	Latitude	0.882611	Longitude	35.794083

Distance (m)	Rho-a (Wm)
0	82.94
10	92.75
20	93.38
30	82.07
40	77.41
50	82.95
60	66.61
70	65.35
80	51.78
90	47.25
100	42.35
110	36.82
120	30.16
130	21.99
140	16.21
150	18.47
160	22.25
170	17.59
180	17.34
190	19.1



	Location	Kinyach	Site No.	HEP-24-2
	Site Name	TOBOROI	Elevation	1453
Start Point	Latitude	0.876778	Longitude	35.800861
End Point	Latitude	0.877750	Longitude	35.799417

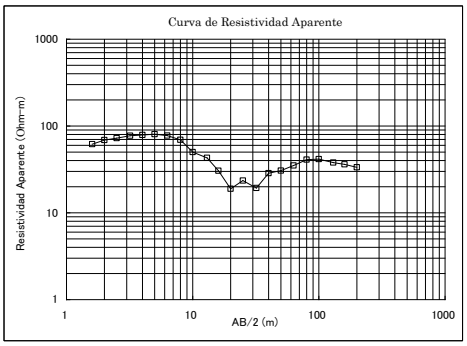
Distance (m)	Rho-a (Wm)
0	16.71
10	23.12
20	26.77
30	30.16
40	23
50	26.39
60	26.51
70	28.15
80	33.56
90	33.68
100	27.02
110	23.13
120	30.29
130	32
140	27.02
150	21.99
160	24.6
170	32.68
180	42.73
190	37.07



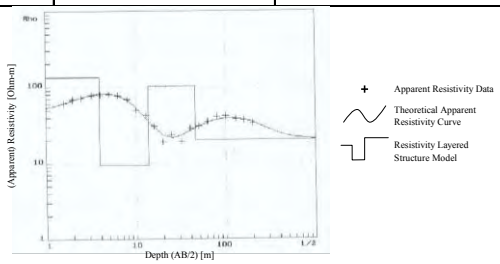
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Bartabwa
	Location	Kinyach	Site No.	V-24-1
	Site Name	TOBOROI	Elevation	1457
36N	UTM-E	810957	UTM-N	97805
	Latitude	0.884083	Longitude	35.793639

AB/2 (m)	Rho-a (Wm)
1.6	61.85
2	68.79
2.5	72.38
3.2	77.24
4	78.95
5	80.36
6.3	77.5
8	69.4
10	50.08
13	42.93
16	30.51
20	18.9
25	23.52
32	19.32
40	28.65
50	30.6
63	35.1
80	41.04
100	41.57
130	37.91
160	36.21
200	33.42



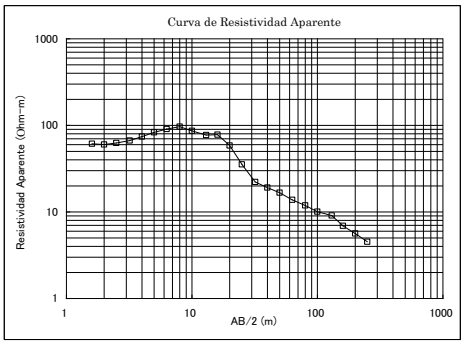
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
49	0.9	Dry top superficial layer	Dry. No aquifers
132	4	Slightly weathered and fractured trachyphonolites	Dry
9	14	Highly weathered and fractured trachyphonolites and basalts rocks.	Dry
102	46	Slightly weathered / fractured trachyphonolites / basalts	No aquifers
20	>46	Highly weathered/fractured trachyphonolites/ basalts	Aquiferous



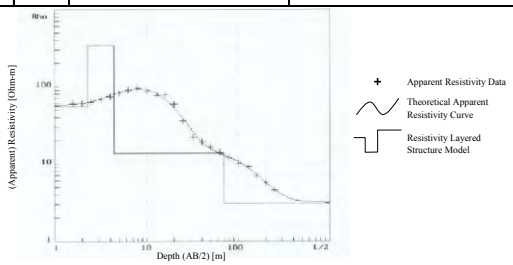
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Bartabwa
	Location	Kinyach	Site No.	V-24-2
	Site Name	TOBOROI	Elevation	
36N	UTM-E	811662	UTM-N	97097
	Latitude	0.877417	Longitude	35.800028

AB/2 (m)	Rho-a (Wm)
1.6	61.42
2	60.18
2.5	62.6
3.2	66.88
4	74.3
5	82.94
6.3	90.52
8	96.6
10	86.39
13	77.19
16	78.13
20	58.59
25	35.48
32	22.22
40	19.09
50	16.66
63	13.81
80	11.87
100	10.08
130	9.08
160	6.9
200	5.64
250	4.52



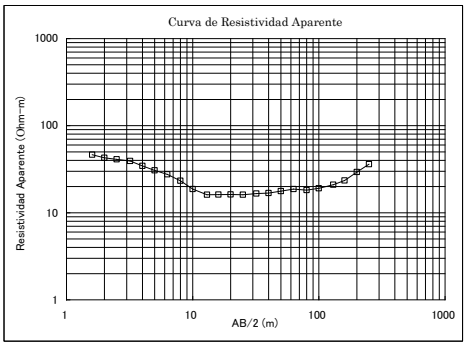
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
56	2.3	Thin dry top superficial layer	Dry.
340	4.4	Slightly weathered and fractured trachyphonolites	Moist.
14	69	Weathered/fractured trachyphonolites and basalts	Shallow aquiferous layer
3	>69	Clays/highly decomposed trachyphonolites / pyroclastics	Aquiferous



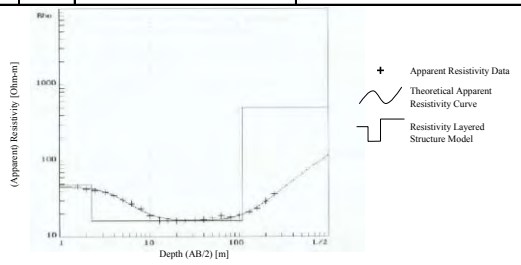
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Bartabwa
	Location	Kinyach	Site No.	V-24-3
	Site Name	TOBOROI	Elevation	
36N	UTM-E	812516	UTM-N	96262
	Latitude	0.869861	Longitude	35.807694

AB/2 (m)	Rho-a (Wm)
1.6	46.39
2	42.71
2.5	40.99
3.2	39.25
4	34.55
5	30.71
6.3	27.65
8	23.28
10	18.71
13	16.11
16	16.18
20	16.2
25	16.13
32	16.58
40	16.81
50	17.72
63	18.71
80	18.22
100	19.11
130	21
160	23.44
200	29.34
250	36.1



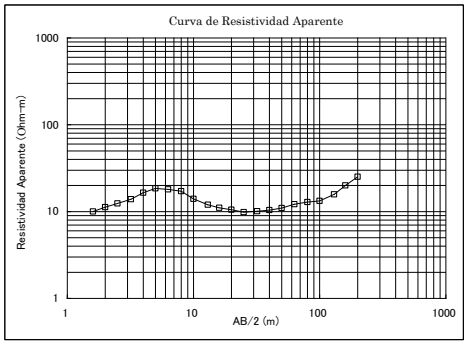
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
46	0.9	Dry top superficial layer	Dry. No aquifers
48	2.3	Volcanic soils	No aquifer
16	108	Highly weathered and fractured trachyphonolites	Aquiferous
500	>108	Compact trachyphonolites/pyroclastics	No aquifer expected



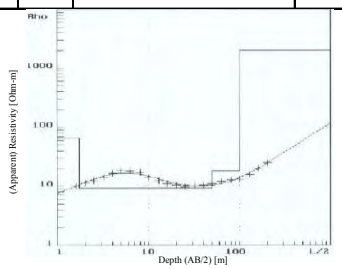
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Kabartonjo
	Location	Bartum	Site No.	V-25
	Site Name	LINGOK	Elevation	1168
36N	UTM-E	827152	UTM-N	64086
	Latitude	0.579028	Longitude	35.938889

AB/2 (m)	Rho-a (Wm)
1.6	10.0
2.0	11.2
2.5	12.4
3.2	13.9
4.0	16.5
5.0	18.5
6.3	18.0
8.0	17.2
10.0	14.0
13.0	12.0
16.0	11.1
20.0	10.5
25.0	9.9
32.0	10.1
40.0	10.4
50.0	11.0
63.0	12.2
80.0	12.9
100.0	13.3
130.0	15.8
160.0	20.0
200.0	25.2



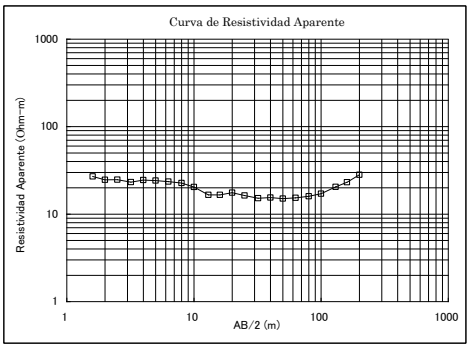
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
6	0.8	Dry top superficial layer	Dry. No aquifers
65	2	Slightly weathered phonolites.	Moist.
9	50	Highly weathered and fractured phonolites	Shallow aquifer expected in this zone
18	100	Slightly weathered and fractured phonolites	Aquiferous layer
2000	>100	Fresh compact basalts	Dry



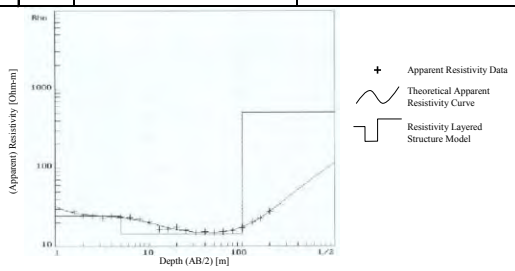
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Kabartonjo
	Location	Bartum	Site No.	V-26
	Site Name	BARKILACH	Elevation	1323
36N	UTM-E	824472	UTM-N	71328
	Latitude	0.644500	Longitude	35.914861

AB/2 (m)	Rho-a (Wm)
1.6	27.0
2.0	24.7
2.5	24.8
3.2	23.2
4.0	24.6
5.0	24.2
6.3	23.5
8.0	22.7
10.0	20.4
13.0	16.6
16.0	16.6
20.0	17.6
25.0	16.3
32.0	15.2
40.0	15.5
50.0	15.0
63.0	15.4
80.0	16.0
100.0	17.1
130.0	20.5
160.0	23.2
200.0	28.2



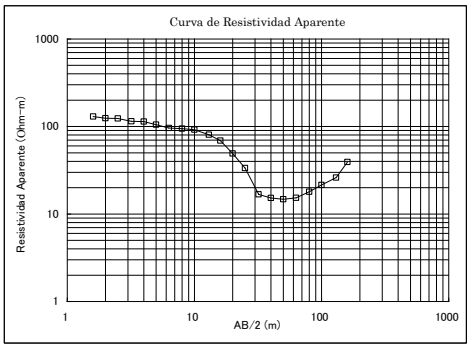
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
72	0.3	Dry top soil. Superficial alluvial material	Dry. No aquifers
24	5	Dry soils with layer fractured vesicular basalts intercalated with the pyroclastics.	Dry
14	102	Fractured , slightly weathered to highly weathered basaltic layer	Aquiferous
507	>102	Fresh compact basalts	Dry



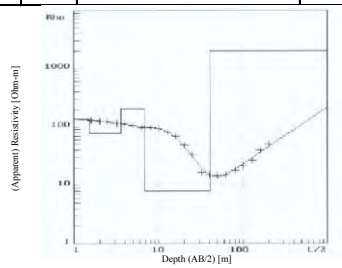
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Kabartonjo
	Location	Bartum	Site No.	V-27
	Site Name	USWONIN	Elevation	1357
36N	UTM-E	820157	UTM-N	67533
	Latitude	0.610250	Longitude	35.876111

AB/2 (m)	Rho-a (Wm)
1.6	130.1
2.0	124.5
2.5	123.4
3.2	114.6
4.0	113.8
5.0	105.0
6.3	96.2
8.0	94.4
10.0	92.0
13.0	80.6
16.0	69.0
20.0	49.1
25.0	33.5
32.0	16.8
40.0	15.3
50.0	14.8
63.0	15.3
80.0	18.0
100.0	21.5
130.0	26.1
160.0	39.3



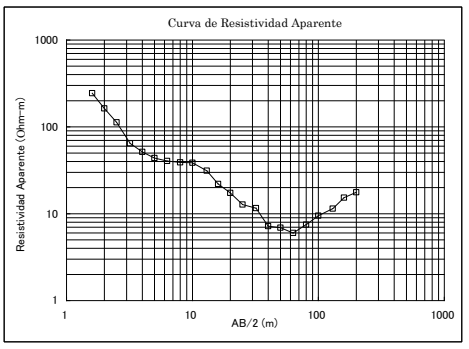
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
137	2	Dry top soil. Superficial alluvial material	Dry. No aquifers
77	4	Dry soils with layered fractured vesicular trachytes intercalated with tuffs.	Dry.
204	7	Compact trachytic layer	Moist no significant aquifers
8	40	Highly fractured and weathered trachytes intercalated with fractured pyroclastics.	Shallow aquifers expected
2000	>40	Fresh compact Volcanic rocks	Dry



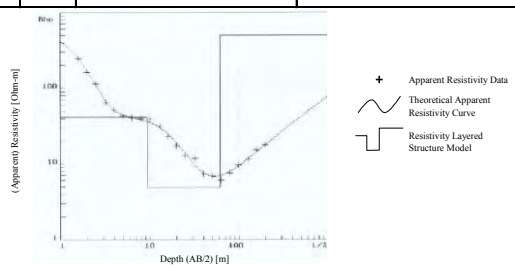
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Kipsaraman
	Location	Sibilo	Site No.	V-28
	Site Name	KOLONGOTWO	Elevation	1068
36N	UTM-E	822177	UTM-N	80801
	Latitude	0.730083	Longitude	35.894306

AB/2 (m)	Rho-a (Wm)
1.6	244.0
2.0	162.8
2.5	112.9
3.2	64.7
4.0	51.5
5.0	43.7
6.3	40.6
8.0	39.0
10.0	38.7
13.0	31.3
16.0	22.0
20.0	17.4
25.0	12.7
32.0	11.6
40.0	7.2
50.0	6.9
63.0	6.0
80.0	7.5
100.0	9.5
130.0	11.4
160.0	15.3
200.0	17.6



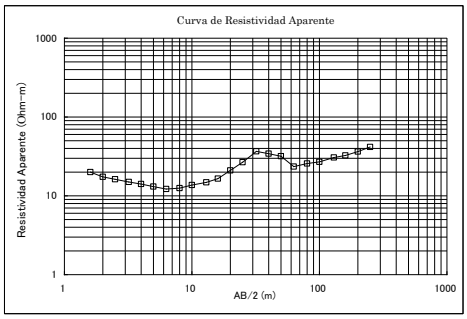
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
560	0.8	Dry top soil. Superficial compact material	Dry. No aquifers
20	1.9	Dry soils with layer fractured pyroclastics	Dry
42	9	Fractured , slightly weathered phonolitic layer	Moist no significant aquifers
5	62	Fractured phonolites intercalated with fractured pyroclastics.	Shallow expected aquifers
500	>500	Fresh compact Volcanic rocks	Dry



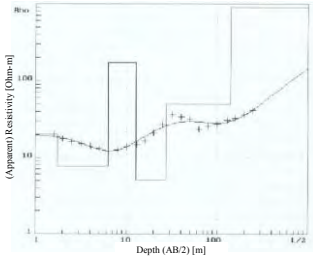
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Kipsaraman
	Location	Sibilo	Site No.	V-29
	Site Name	KOIBOWALE	Elevation	1113
36N	UTM-E	822908	UTM-N	76402
	Latitude	0.690333	Longitude	35.900861

AB/2 (m)	Rho-a (Wm)
1.6	20.0
2.0	17.4
2.5	16.2
3.2	15.0
4.0	14.1
5.0	13.1
6.3	12.2
8.0	12.5
10.0	13.7
13.0	14.8
16.0	16.5
20.0	21.0
25.0	26.7
32.0	36.6
40.0	34.3
50.0	31.8
63.0	23.5
80.0	25.7
100.0	27.0
130.0	30.6
160.0	32.5
200.0	36.4
250.0	41.7



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
20	2	Dry top soil. Superficial alluvial material	Dry. No aquifers
8	6	Dry soils with layer fractured trachytes basalts	Dry
175	13	Fractured , slightly weathered basaltic layer	Moist. No significant aquifers
5	27	Fractured basalt intercalated with fractured pyroclastics.	No significant aquifers expected in this layer
50	140	Highly weathered pyroclastics and old land	Aquiferous
900	>140	Fresh compact Basalts rocks	Dry

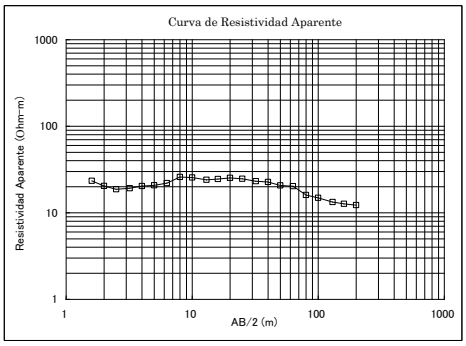


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

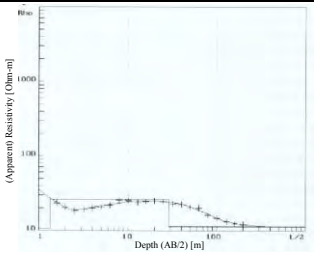
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Kipsaraman
	Location	Sibilo	Site No.	V-31
	Site Name	KIPCHEMOI	Elevation	1009
36N	UTM-E	825531	UTM-N	81818
	Latitude	0.739250	Longitude	35.924417

AB/2 (m)	Rho-a (Wm)
1.6	23.4
2.0	20.4
2.5	18.7
3.2	19.2
4.0	20.4
5.0	20.8
6.3	22.0
8.0	25.9
10.0	25.6
13.0	24.0
16.0	24.6
20.0	25.3
25.0	24.7
32.0	23.2
40.0	22.7
50.0	20.7
63.0	20.3
80.0	16.0
100.0	14.9
130.0	13.3
160.0	12.7
200.0	12.3



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
55	0.5	Dry top soil. Superficial alluvial material	Dry. No aquifers
11	1.3	Dry soils with layer fractured vesicular phonolites	Dry
26	29	Fractured , slightly weathered basaltic layer	Moist
11	>29	Highly weathered basalts.	Aquiferous

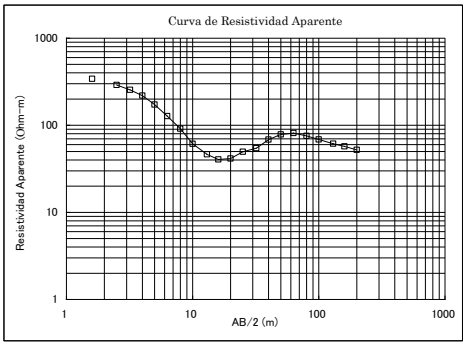


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

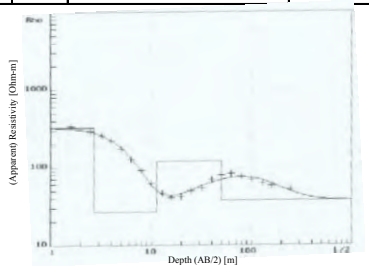
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Bartabwa
	Location	Ng'orora	Site No.	V-32
	Site Name	KAPTURO	Elevation	1364
36N	UTM-E	814718	UTM-N	100533
	Latitude	0.908444	Longitude	35.827500

AB/2 (m)	Rho-a (Wm)
1.6	342.0
2.0	
2.5	290.1
3.2	255.1
4.0	219.3
5.0	172.0
6.3	127.5
8.0	91.3
10.0	61.3
13.0	46.4
16.0	40.5
20.0	41.5
25.0	49.6
32.0	54.6
40.0	68.5
50.0	78.5
63.0	81.4
80.0	75.5
100.0	68.7
130.0	61.5
160.0	57.2
200.0	52.2



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
327	3	Dry top superficial layer	Dry. No aquifers
27	11	Slightly weathered tuffs.	Moist. Very thin aquifer layer. Not potential for groundwater exploitation.
120	50	Slightly weathered and fractured trachyte	Shallow aquifer expected in this zone
37	>50	Highly weathered and fractured trachytes rocks.	Aquiferous layer

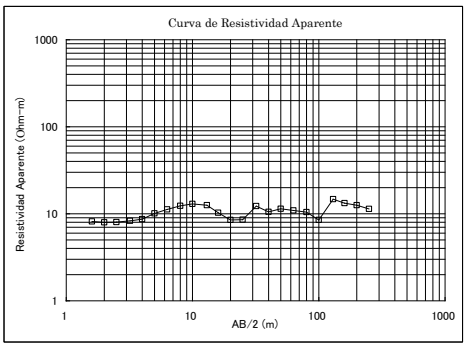


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

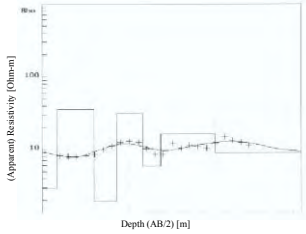
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Bartabwa
	Location	Ng'orora	Site No.	V-33
	Site Name	RONDININ (Chepkesin)	Elevation	1132
36N	UTM-E	819659	UTM-N	82054
	Latitude	0.741417	Longitude	35.871722

AB/2 (m)	Rho-a (Wm)
1.6	8.2
2.0	8.0
2.5	8.0
3.2	8.3
4.0	8.7
5.0	10.1
6.3	11.2
8.0	12.4
10.0	13.0
13.0	12.6
16.0	10.3
20.0	8.5
25.0	8.6
32.0	12.2
40.0	10.5
50.0	11.4
63.0	10.9
80.0	10.4
100.0	8.5
130.0	14.7
160.0	13.3
200.0	12.6
250.0	11.4



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
11	0.8	Dry top superficial layer	Dry. No aquifers
3	2	Moist to dry volcanic soils	Moist. No aquifers are expected
36	4	Volcanic ashes and sediments	Dry. No aquifers are expected
2	7.5	Highly weathered volcanic ashes	Moist. Not potential for groundwater exploitation
31	15	Slightly weathered trachytes	Moist. Very thin aquifer layer.
6	23	Slightly weathered and fractured phonolites	Shallow aquifer expected in this zone
16	100	Highly weathered and fractured phonolites.	Aquiferous layer
9	>100	Fractured and weathered basalts and old surface layer.	Aquiferous. Deep aquifers expected

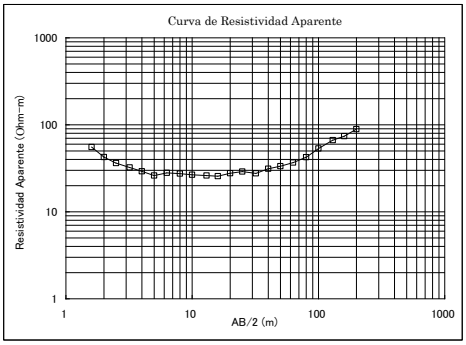


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

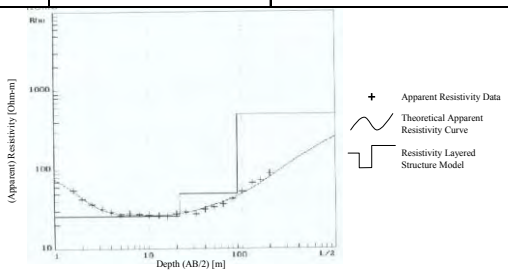
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Bartabwa
	Location	Ng'orora	Site No.	V-35
	Site Name	CHEMOE	Elevation	1080
36N	UTM-E	822312	UTM-N	89874
	Latitude	0.812056	Longitude	35.895583

AB/2 (m)	Rho-a (Wm)
1.6	55.5
2.0	42.5
2.5	36.3
3.2	32.3
4.0	29.3
5.0	26.1
6.3	28.0
8.0	27.5
10.0	26.6
13.0	26.1
16.0	25.7
20.0	27.7
25.0	29.0
32.0	27.7
40.0	31.2
50.0	33.5
63.0	36.8
80.0	42.4
100.0	53.3
130.0	66.7
160.0	74.0
200.0	89.0



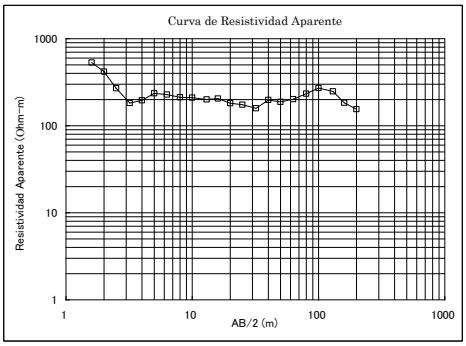
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
100	0.7	Dry top superficial layer	Dry. No aquifers
26	22	Moist to dry pyroclastics especially the agglomeratic tuffs	Moist. No aquifers are expected
50	90	Highly weathered and fractured trachytes and phonolites.	Aquiferous layer
500	>90	Fresh compact Volcanic rocks	Dry



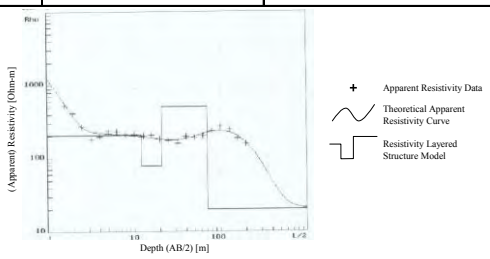
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Barwessa
	Location	Barwessa	Site No.	V-36
	Site Name	BARWESSA PRIMARY SCHOOL	Elevation	1135
36N	UTM-E	800348	UTM-N	78917
	Latitude	0.713194	Longitude	35.698389

AB/2 (m)	Rho-a (Wm)
1.6	531.9
2.0	418.6
2.5	268.8
3.2	182.4
4.0	196.0
5.0	235.8
6.3	227.8
8.0	212.0
10.0	209.8
13.0	200.2
16.0	205.3
20.0	181.6
25.0	174.2
32.0	158.6
40.0	197.5
50.0	188.2
63.0	201.2
80.0	233.5
100.0	271.2
130.0	248.3
160.0	183.5
200.0	154.9



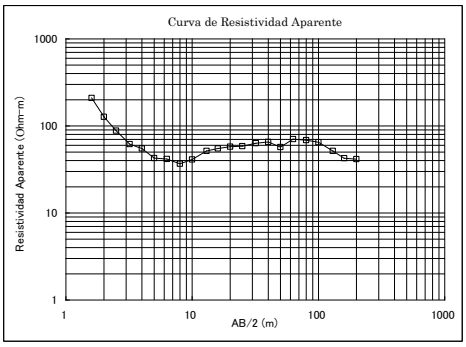
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
2740	0.5	Dry and compact top superficial layer	Dry. No aquifers
208	12	Moist to dry volcanic ash and sediments	Moist. No aquifers are expected
79	21	Slightly weathered trachytes	Dry. No aquifers are expected
502	70	Fresh and compact trachytes	Dry and non aquiferous
20	>70	Highly weathered trachytes and trachytic phonolites.	Aquiferous going deeper.



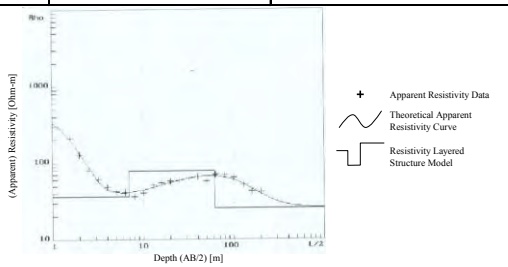
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Kabartonjo
	Location	Katiorin	Site No.	V-39
	Site Name	SEREMWO	Elevation	1654
36N	UTM-E	801519	UTM-N	62708
	Latitude	0.566694	Longitude	35.708806

AB/2 (m)	Rho-a (Wm)
1.6	209.1
2.0	127.3
2.5	88.1
3.2	61.7
4.0	55.0
5.0	42.7
6.3	41.7
8.0	36.8
10.0	41.1
13.0	51.7
16.0	55.0
20.0	57.8
25.0	58.6
32.0	63.3
40.0	65.4
50.0	57.2
63.0	70.4
80.0	68.6
100.0	64.9
130.0	51.7
160.0	42.5
200.0	41.5



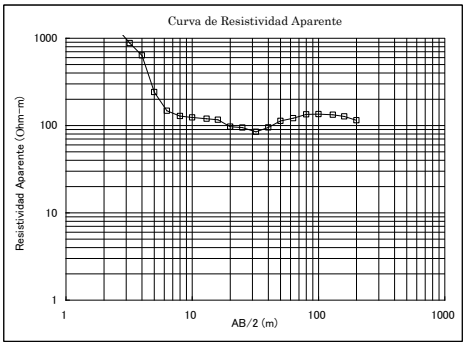
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
457	0.7	Dry top superficial layer	Dry. No aquifers
37	7	Moist to dry volcanic soils	Moist. No aquifers are expected
78	62	Slightly weathered and fractured trachytic phonolites	Shallow aquifer expected in this zone
26	>62	Highly weathered and fractured phonolites.	Main aquiferous layer



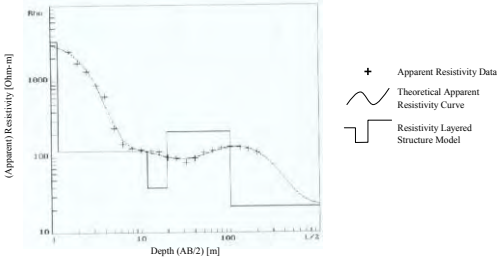
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Kabartonjo
	Location	Katiorin	Site No.	V-40
	Site Name	KAPKIRWOK	Elevation	1958
36N	UTM-E	804981	UTM-N	64678
	Latitude	0.584500	Longitude	35.739861

AB/2 (m)	Rho-a (Wm)
1.6	2475.0
2.0	1727.5
2.5	1332.9
3.2	879.2
4.0	636.1
5.0	242.0
6.3	147.7
8.0	128.6
10.0	123.6
13.0	119.7
16.0	116.4
20.0	97.0
25.0	94.9
32.0	84.7
40.0	95.2
50.0	113.0
63.0	121.5
80.0	134.1
100.0	135.0
130.0	132.9
160.0	127.1
200.0	115.0



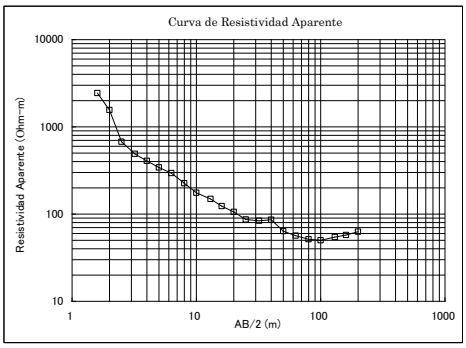
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
3309	1.2	Dry top superficial deposits	Dry. No aquifers
120	12	Moist to dry ashes and sediments	Moist. No aquifers are expected
39	20	Slightly weathered tuffaceous layer.	Dry. No aquifers are expected
217	100	Slightly weathered phonolites	Moist. Thin aquifer layer. Not potential for groundwater exploitation
22	>100	Highly weathered phonolites.	Aquiferous.



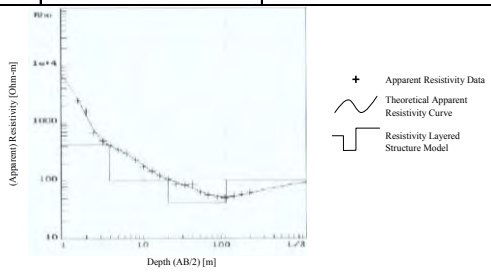
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Kabartonjo
	Location	Saimo Mosop	Site No.	V-42
	Site Name	KAPCHEPKOR	Elevation	2163
36N	UTM-E	813844	UTM-N	70018
	Latitude	0.632694	Longitude	35.819472

AB/2 (m)	Rho-a (Wm)
1.6	2439.6
2.0	1558.4
2.5	675.8
3.2	490.8
4.0	407.1
5.0	343.0
6.3	295.0
8.0	225.7
10.0	175.3
13.0	149.0
16.0	123.5
20.0	105.8
25.0	86.6
32.0	83.7
40.0	86.2
50.0	63.6
63.0	56.5
80.0	51.5
100.0	50.1
130.0	54.4
160.0	57.6
200.0	62.8



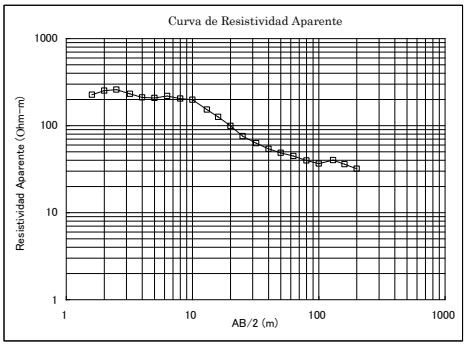
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
1359	0.5	Dry top superficial deposits	Dry. No aquifers
420	4	Dry to moist Volcanic ashes and sediments	Moist. No aquifers are expected
101	20	Slightly weathered pyroclastics	Dry. No aquifers are expected
42	105	Highly weathered trachytes	Shallow aquifer layer expected in this layer.
100	>105	Slightly weathered trachytes and phonolites	Aquiferous.



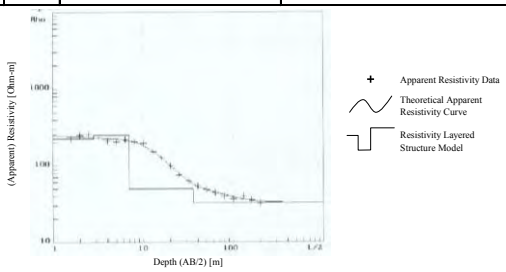
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Kabartonjo
	Location	Saimo Mosop	Site No.	V-43
	Site Name	KAPTERE	Elevation	2247
36N	UTM-E	812038	UTM-N	68531
	Latitude	0.619306	Longitude	35.803250

AB/2 (m)	Rho-a (Wm)
1.6	226.6
2.0	252.4
2.5	259.2
3.2	231.5
4.0	210.7
5.0	207.8
6.3	219.1
8.0	204.3
10.0	198.7
13.0	152.6
16.0	126.1
20.0	99.3
25.0	75.9
32.0	62.8
40.0	54.2
50.0	48.7
63.0	44.8
80.0	39.8
100.0	36.6
130.0	40.1
160.0	36.0
200.0	32.0



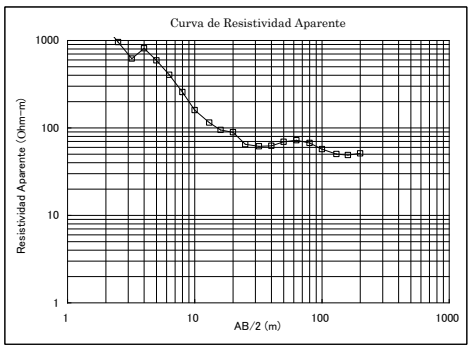
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
266	0.6	Dry top superficial deposits	Dry.
226	3	Compact Volcanic ashes and sediments	Moist. No aquifers are expected
250	7	Compact pyroclastics	Dry.
49	36	Highly weathered trachytes	Moist. Thin aquifer layer.
33	>36	Slightly weathered trachytes and phonolites	Aquiferous



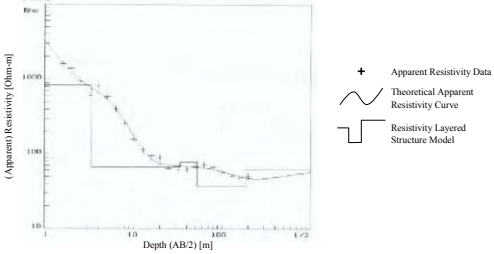
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Kabartonjo
	Location	Saimo Mosop	Site No.	V-44
	Site Name	BOINO	Elevation	2138
36N	UTM-E	813237	UTM-N	71271
	Latitude	0.644000	Longitude	35.814000

AB/2 (m)	Rho-a (Wm)
1.6	1616.4
2.0	1425.8
2.5	956.4
3.2	618.9
4.0	811.8
5.0	591.3
6.3	404.2
8.0	256.6
10.0	159.9
13.0	115.0
16.0	94.8
20.0	89.0
25.0	65.1
32.0	61.5
40.0	62.5
50.0	69.4
63.0	72.3
80.0	67.1
100.0	57.1
130.0	50.3
160.0	48.9
200.0	51.0



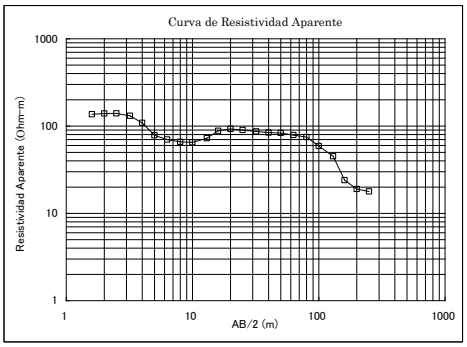
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
6322	0.5	Dry top superficial deposits	Dry. No aquifers
845	3	Dry to moist Volcanic ashes and sediments	Moist. No aquifers are expected
68	34	Slightly weathered pyroclastics	Dry. No aquifers are expected
78	53	Highly weathered trachytes	Moist. Thin aquifer layer. Not potential for groundwater exploitation
37	87	Slightly weathered trachytes and phonolites	Shallow aquifer layer.
63	>87	Fractured and weathered phonolites	Deep aquifers expected in this zone



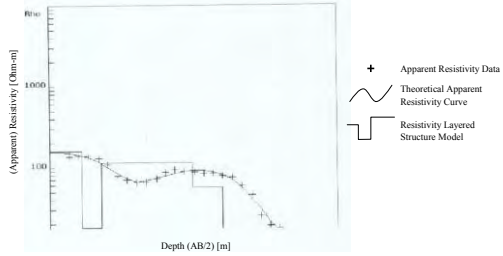
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Kabartonjo
	Location	Ossen	Site No.	V-45
	Site Name	TIRIONDONIN	Elevation	2005
36N	UTM-E	807874	UTM-N	71212
	Latitude	0.643528	Longitude	35.765889

AB/2 (m)	Rho-a (Wm)
1.6	136.5
2.0	139.2
2.5	139.8
3.2	131.1
4.0	108.9
5.0	78.5
6.3	70.2
8.0	66.0
10.0	65.1
13.0	72.6
16.0	88.3
20.0	92.9
25.0	89.9
32.0	86.9
40.0	84.2
50.0	83.4
63.0	78.8
80.0	74.7
100.0	59.0
130.0	45.0
160.0	24.0
200.0	19.0
250.0	17.8



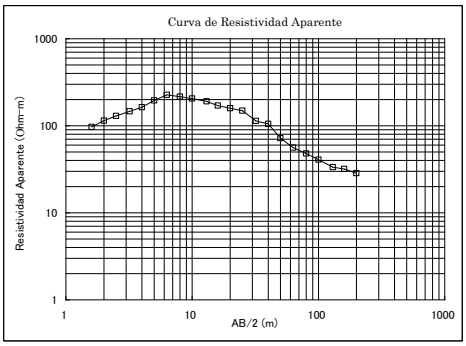
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
159	2	Dry top superficial deposits	Dry.
18	3	Moist Volcanic soils and sediments	Moist. No aquifers are expected
114	31	Slightly weathered phonolites	Dry.
56	63	Fractured and weathered phonolites	Shallow aquifer layer expected in this layer.
11	>63	Highly weathered phonolites	Aquiferous



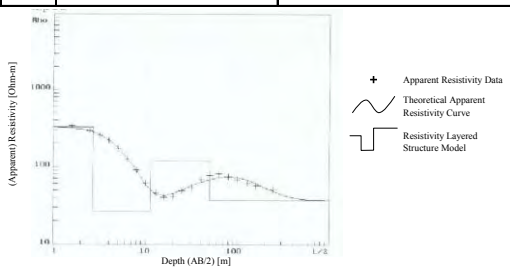
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Kabartonjo
	Location	Ossen	Site No.	V-46
	Site Name	KAPTUM- OSSEN	Elevation	2180
36N	UTM-E	808396	UTM-N	66638
	Latitude	0.602167	Longitude	35.770528

AB/2 (m)	Rho-a (Wm)
1.6	97.1
2.0	114.3
2.5	130.0
3.2	146.5
4.0	163.5
5.0	195.3
6.3	227.0
8.0	216.0
10.0	205.3
13.0	190.6
16.0	170.8
20.0	159.1
25.0	149.0
32.0	113.8
40.0	105.4
50.0	72.1
63.0	56.0
80.0	48.0
100.0	40.8
130.0	33.4
160.0	31.8
200.0	28.5



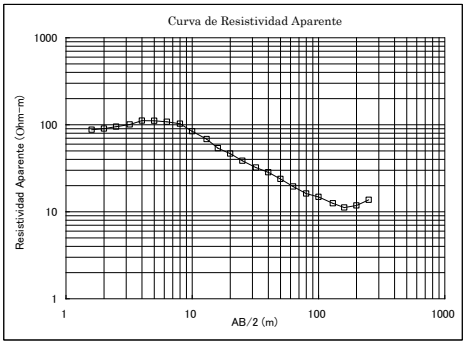
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
69	1	Dry top superficial layer	Dry.
811	3	Dry fractured pyroclastics rocks	Dry
125	23	Slightly fractured tuff and trachytes	Dry. No aquifers are expected
29	>100	Highly weathered trachytes	Aquiferous



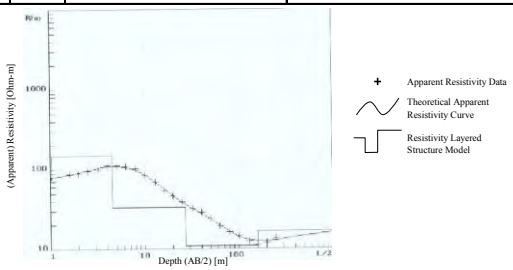
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Kabartonjo
	Location	Kelyo	Site No.	V-49
	Site Name	KURESCHUN	Elevation	2188
36N	UTM-E	811704	UTM-N	71405
	Latitude	0.645194	Longitude	35.800250

AB/2 (m)	Rho-a (Wm)
1.6	87.6
2.0	90.4
2.5	94.9
3.2	100.8
4.0	111.4
5.0	111.0
6.3	108.0
8.0	102.8
10.0	84.2
13.0	68.3
16.0	53.8
20.0	46.6
25.0	38.6
32.0	32.2
40.0	28.4
50.0	23.8
63.0	19.5
80.0	16.2
100.0	14.8
130.0	12.5
160.0	11.2
200.0	11.8
250.0	13.7



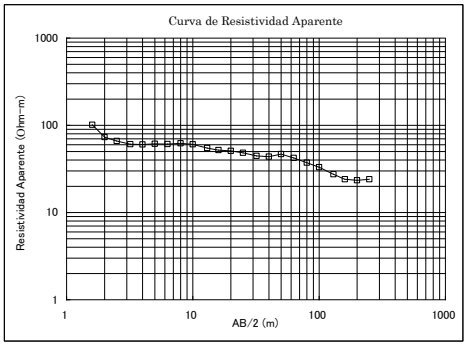
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
74	1	Dry top superficial layer	Dry. No aquifers
150	5	Dry volcanic ashes and sediments.	No aquifers are expected
34	27	Slightly fractured tuffaceous layer	Dry. No aquifers are expected
11	160	Highly weathered and fractured tuffs	Aquiferous
17	>160	Slightly weathered trachytes and phonolites	Deep aquifer expected in this layer



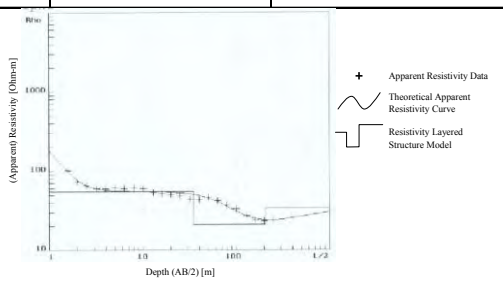
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo North	Division	Kabartonjo
	Location	Kelyo	Site No.	V-50
	Site Name	KIPKOROM	Elevation	2213
36N	UTM-E	810655	UTM-N	71176
	Latitude	0.643194	Longitude	35.790833

AB/2 (m)	Rho-a (Wm)
1.6	101.5
2.0	73.3
2.5	66.2
3.2	60.7
4.0	60.3
5.0	61.3
6.3	60.9
8.0	62.2
10.0	60.6
13.0	54.9
16.0	51.9
20.0	50.9
25.0	48.4
32.0	44.6
40.0	43.7
50.0	46.8
63.0	42.3
80.0	37.3
100.0	33.1
130.0	27.5
160.0	24.1
200.0	23.4
250.0	24.1



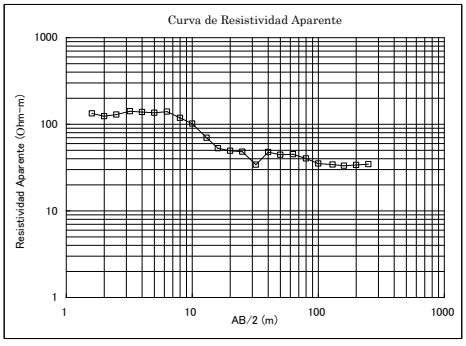
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
350	1	Dry top superficial layer	Dry. No aquifers
55	35	Moist to dry volcanic soils	Moist. No aquifers are expected
21	206	Highly weathered and fractured trachytes and	Aquifers expected in this layer
34	>206	Slightly weathered phonolitic layer.	Low water strikes expected in this layer



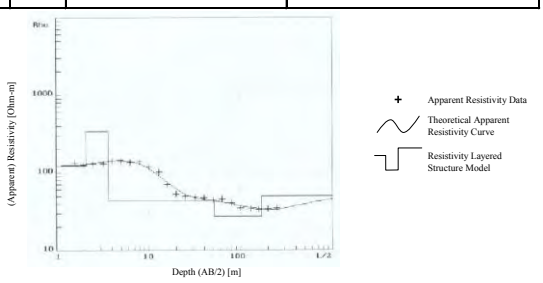
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Marigat	Site No.	V-51
	Site Name	KAMAGONGE	Elevation	
36N	UTM-E	830979	UTM-N	51802
	Latitude	0.468028	Longitude	35.973167

AB/2 (m)	Rho-a (Wm)
1.6	133.3
2.0	123.8
2.5	129.3
3.2	141.1
4.0	138.3
5.0	135.5
6.3	140.0
8.0	118.3
10.0	101.8
13.0	69.7
16.0	52.8
20.0	49.4
25.0	48.3
32.0	34.1
40.0	47.7
50.0	44.4
63.0	45.0
80.0	40.3
100.0	35.2
130.0	34.2
160.0	33.2
200.0	33.9
250.0	34.6



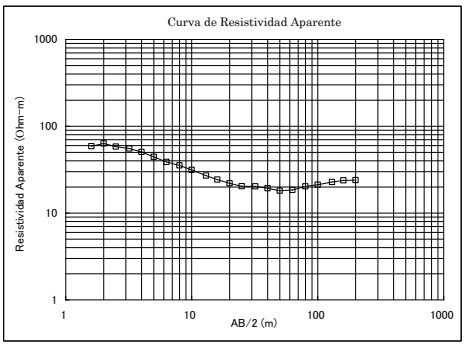
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
121	2	Dry top superficial layer	Dry. No aquifers
338	4	Dry silts	Dry , No aquifers are expected
27	52	Slightly weathered tuffs	Moist. Thin aquifer layer.
50	>170	Highly weathered volcanic tuffs	Deep aquifer expected in this layer



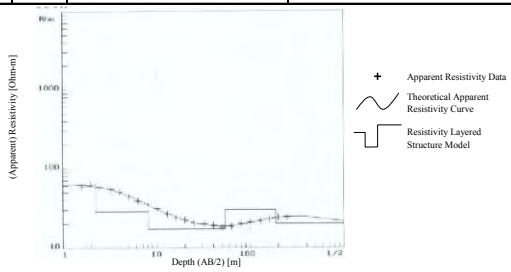
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Marigat	Site No.	V-54
	Site Name	SIRINYO	Elevation	1104
36N	UTM-E	830313	UTM-N	55590
	Latitude	0.502278	Longitude	35.967222

AB/2 (m)	Rho-a (Wm)
1.6	58.9
2.0	63.5
2.5	58.3
3.2	55.4
4.0	50.5
5.0	44.5
6.3	38.8
8.0	35.4
10.0	31.5
13.0	27.0
16.0	24.3
20.0	22.0
25.0	20.4
32.0	20.3
40.0	19.3
50.0	18.1
63.0	18.5
80.0	20.3
100.0	21.2
130.0	22.8
160.0	23.8
200.0	24.0



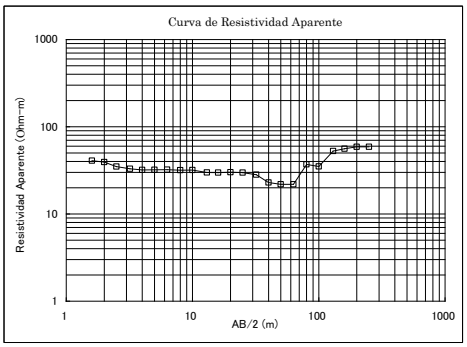
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
64	2.2	Dry top superficial layer	Dry. No aquifers
29	8	Moist to dry volcanic soils	Moist. No aquifers are expected
17	53	Fractured and weathered tuffs	Moist. Thin aquifer layer.
30	186	Highly weathered volcanic tuffs	Aquifers expected in this layer
20	>186	Highly weathered and fractured tuffaceous	Deep aquifer expected in this layer



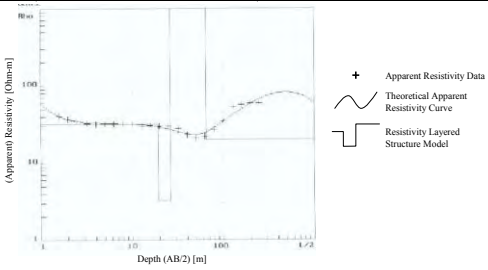
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Marigat	Site No.	V-56
	Site Name	KIMIMBA -KIBOWEN	Elevation	1226
36N	UTM-E	824421	UTM-N	47557
	Latitude	0.429694	Longitude	35.914306

AB/2 (m)	Rho-a (Wm)
1.6	40.8
2.0	39.3
2.5	35.0
3.2	33.0
4.0	32.0
5.0	32.1
6.3	32.2
8.0	31.8
10.0	31.9
13.0	29.9
16.0	29.8
20.0	30.1
25.0	29.8
32.0	28.3
40.0	22.9
50.0	21.9
63.0	21.9
80.0	37.0
100.0	35.0
130.0	52.6
160.0	55.9
200.0	58.9
250.0	58.9



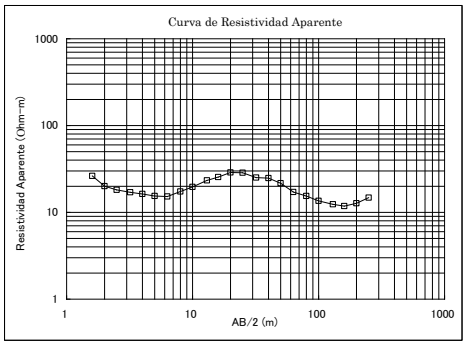
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
123	0.4	Dry top superficial layer	Dry. No aquifers
32	19	Moist to dry volcanic soils	Moist. No aquifers are expected
3	26	Slightly weathered tuffaceous materials	Moist. Thin aquifer layer.
992	65	Compact tuffs	Dry
20	>65	Highly weathered and fractured tuffaceous	Deep aquifer expected in this layer



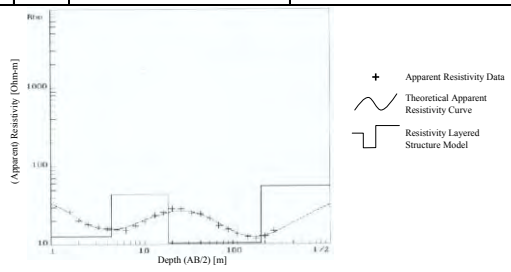
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Marigat	Site No.	V-58
	Site Name	CATHOLIC	Elevation	1023
36N	UTM-E	832090	UTM-N	51809
	Latitude	0.468111	Longitude	35.983167

AB/2 (m)	Rho-a (Wm)
1.6	26.3
2.0	20.0
2.5	18.2
3.2	17.0
4.0	16.3
5.0	15.5
6.3	15.2
8.0	17.4
10.0	19.6
13.0	23.3
16.0	25.5
20.0	28.9
25.0	28.7
32.0	25.1
40.0	24.8
50.0	21.7
63.0	17.1
80.0	15.4
100.0	13.6
130.0	12.4
160.0	11.8
200.0	12.7
250.0	14.8



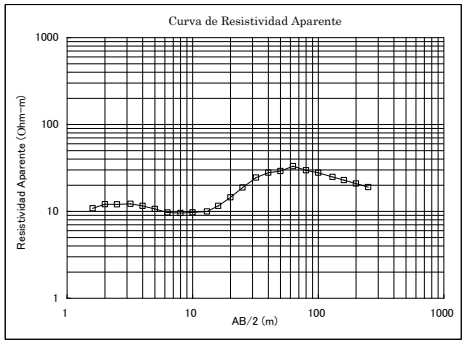
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
42	0.7	Dry top superficial layer	Dry. No aquifers
13	4.5	Moist to dry volcanic soils	Moist. No aquifers are expected
43	18	Slightly weathered tuffaceous materials	Moist.
11	180	Highly weathered and fractured tuffs and trachytes	Aquifers expected in this layer
56	>180	Slightly weathered trachytes	Deep aquifer expected in this layer



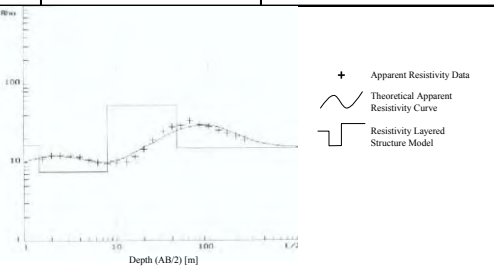
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Marigat	Site No.	V-60
	Site Name	NDAMBUL	Elevation	1009
36N	UTM-E	833584	UTM-N	52915
	Latitude	0.478083	Longitude	35.996556

AB/2 (m)	Rho-a (Wm)
1.6	10.9
2.0	12.1
2.5	12.1
3.2	12.2
4.0	11.6
5.0	10.7
6.3	9.7
8.0	9.6
10.0	9.7
13.0	10.0
16.0	11.6
20.0	14.5
25.0	18.8
32.0	24.5
40.0	27.8
50.0	29.1
63.0	33.1
80.0	29.7
100.0	27.9
130.0	24.9
160.0	22.9
200.0	20.9
250.0	19.0



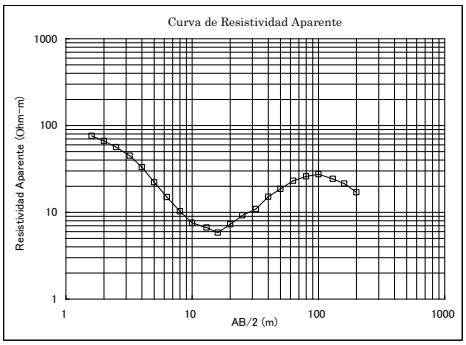
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
5.5	1	Dry top superficial layer	Dry.
17	2	Moist to dry volcanic soils	Moist. No aquifers are expected
8	8	Weathered tuffaceous materials	Moist.
53	45	Highly weathered and fractured tuffs and trachytes	Aquifers expected in this layer
15	>45	Weathered trachytes and OLS	Deep aquifer expected in this layer



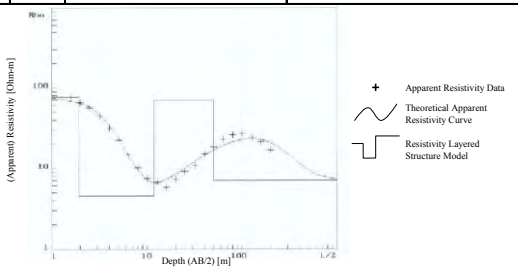
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Eldume	Site No.	V-61
	Site Name	ABORI	Elevation	1113
37N	UTM-E	174752	UTM-N	45703
	Latitude	0.412944	Longitude	36.078278

AB/2 (m)	Rho-a (Wm)
1.6	76.0
2.0	66.6
2.5	56.4
3.2	44.9
4.0	33.2
5.0	22.2
6.3	15.0
8.0	10.3
10.0	7.6
13.0	6.7
16.0	5.8
20.0	7.3
25.0	9.2
32.0	10.9
40.0	15.1
50.0	18.6
63.0	23.1
80.0	26.0
100.0	27.4
130.0	24.3
160.0	21.5
200.0	17.0



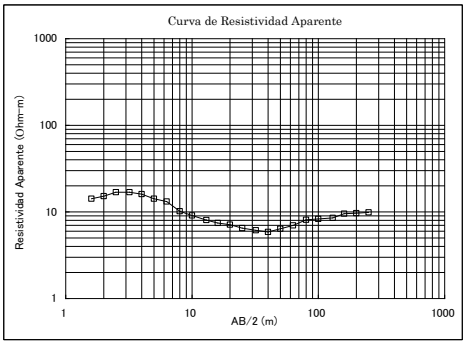
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
76	2	Dry top superficial layer	Dry.
5	12	Moist volcanic soils	Moist. No aquifers are expected
71	50	Slightly weathered tuffaceous materials	Moist. Shallow aquifers may be present
7	>50	Highly weathered and fractured tuffs and trachytes.	Aquifers expected in this layer



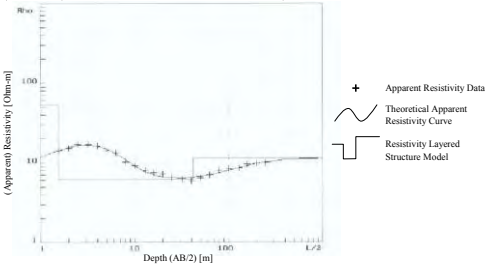
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Eldume	Site No.	V-63
	Site Name	ELDUME CENTRE	Elevation	1009
37N	UTM-E	168954	UTM-N	45251
	Latitude	0.408889	Longitude	36.026250

AB/2 (m)	Rho-a (Wm)
1.6	14.2
2.0	15.2
2.5	16.9
3.2	16.9
4.0	16.1
5.0	14.2
6.3	13.2
8.0	10.2
10.0	9.1
13.0	8.1
16.0	7.5
20.0	7.1
25.0	6.5
32.0	6.1
40.0	5.9
50.0	6.4
63.0	7.0
80.0	8.1
100.0	8.3
130.0	8.5
160.0	9.6
200.0	9.7
250.0	9.9



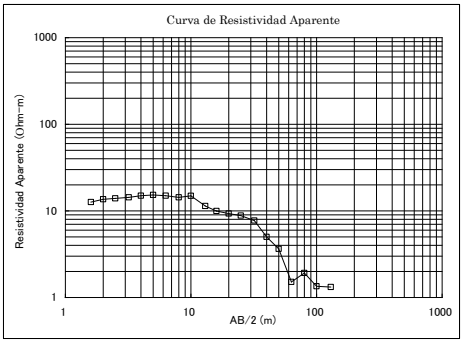
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
10	1	Dry top superficial layer	Dry.
53	2	Moist to dry volcanic soils	Moist. No aquifers are expected
6	42	Slightly weathered tuffaceous materials	Moist. Shallow aquifers may be present
12	>42	Highly weathered and fractured tuffs and trachytes.	Aquifers expected in this layer



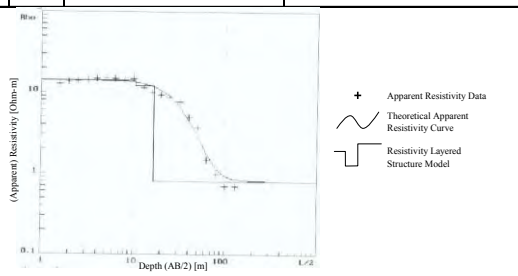
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Salabani	Site No.	V-64
	Site Name	LONGORON	Elevation	1364
37N	UTM-E	169064	UTM-N	62450
	Latitude	0.564250	Longitude	36.027167

AB/2 (m)	Rho-a (Wm)
1.6	12.6
2.0	13.6
2.5	13.9
3.2	14.3
4.0	15.0
5.0	15.3
6.3	15.0
8.0	14.3
10.0	14.9
13.0	11.4
16.0	10.0
20.0	9.3
25.0	8.8
32.0	7.7
40.0	5.0
50.0	3.6
63.0	1.5
80.0	1.9
100.0	1.4
130.0	1.3



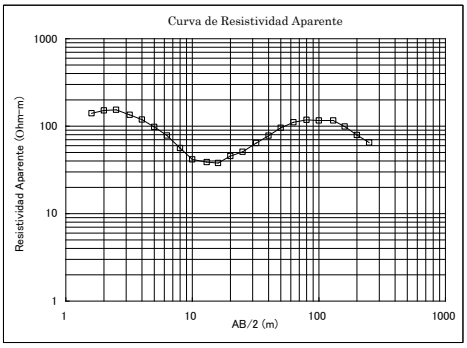
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
14	11	Dry top superficial layer	Dry.
12	17	Moist to dry volcanic soils	Moist. No aquifers are expected
0.8	>17	Highly weathered and fractured tuffaceous	Aquifers expected in this layer



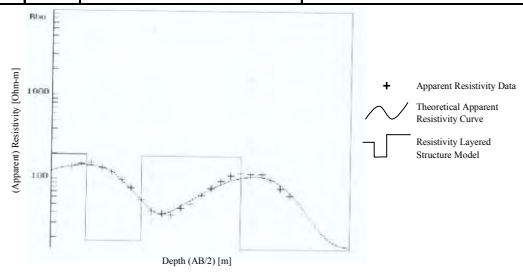
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Salabani	Site No.	V-66
	Site Name	KAMBI YA SAMAKI	Elevation	1008
37N	UTM-E	167779	UTM-N	68905
	Latitude	0.622556	Longitude	36.015611

AB/2 (m)	Rho-a (Wm)
1.6	140.6
2.0	151.0
2.5	153.8
3.2	134.7
4.0	118.8
5.0	98.0
6.3	78.0
8.0	56.2
10.0	41.7
13.0	38.8
16.0	37.9
20.0	45.5
25.0	51.0
32.0	64.1
40.0	77.8
50.0	95.6
63.0	110.6
80.0	118.2
100.0	116.3
130.0	116.2
160.0	99.0
200.0	79.2
250.0	64.9



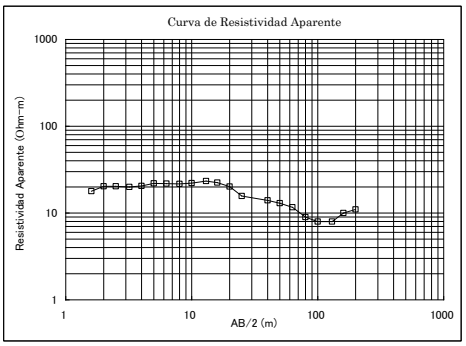
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
64	0.3	Dry top superficial layer	Dry.
198	2.2	Compact dry volcanic soils	Dry
18	8	Slightly weathered tuffaceous materials	Moist.
188	80	Slightly weathered tuffs	Very low water amounts may be present
15	>80	Highly weathered and fractured tuffaceous	Aquifers expected in this layer



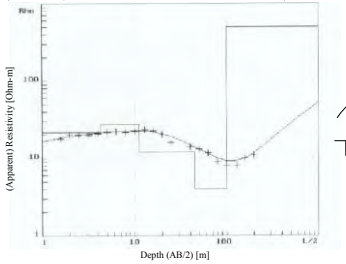
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Ng'ambo	Site No.	V-67-1
	Site Name	LESUUWA	Elevation	991
37N	UTM-E	174145	UTM-N	52638
	Latitude	0.475611	Longitude	36.072806

AB/2 (m)	Rho-a (Wm)
1.6	17.85
2	20.33
2.5	20.3
3.2	19.95
4	20.54
5	21.93
6.3	21.82
8	21.68
10	22.12
13	23.37
16	22.4
20	20.17
25	15.68
40	13.97
50	12.98
63	11.64
80	8.98
100	7.98
130	7.98
160	10
200	10.98



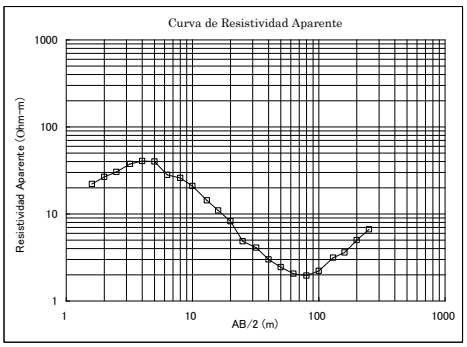
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
11.3	0 -0.3	Dry top superficial layer/ fractured tuff.	Dry. No aquifers
22	0.3-4.3	Weathered and fractured basalts rocks.	Dry.
28	4.3-11	Slightly weathered and fractured basalt	Moist
12	11-45	Weathered and fractured basalts rocks.	Aquiferous
4	45-100	Highly weathered basalts/pyroclastics/clays	Aquiferous
500	>100	Slightly weathered basalt	Aquiferous



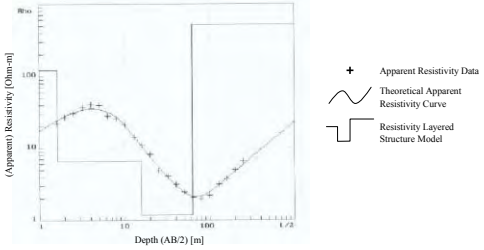
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Ng'ambo	Site No.	V-67-2
	Site Name	LESUUWA	Elevation	985
37N	UTM-E	174327	UTM-N	52841
	Latitude	0.477444	Longitude	36.074444

AB/2 (m)	Rho-a (Wm)
1.6	22.14
2	26.67
2.5	30.41
3.2	37.58
4	40.54
5	40.07
6.3	28.15
8	25.94
10	20.91
13	14.31
16	10.96
20	8.24
25	4.86
32	4.1
40	3
50	2.45
63	2.06
80	1.96
100	2.22
130	3.15
160	3.6
200	5
250	6.66



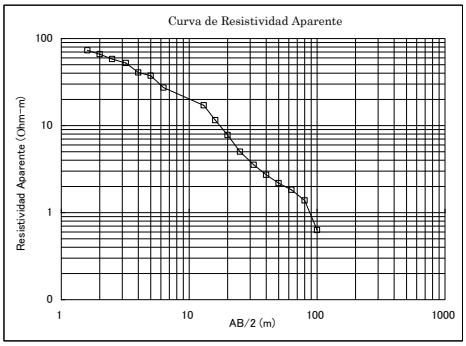
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
8	0 -0.4	Thin dry top superficial layer	Dry.
12	0.4-2	Slightly weathered and fractured basalt	Dry. No aquifers
7	16-2	Weathered and fractured basalts rocks.	Moist
1.2	16-63	Highly weathered basalts/pyroclastics/clays	Aquiferous
523	>63	Slightly weathered basalt	Aquiferous



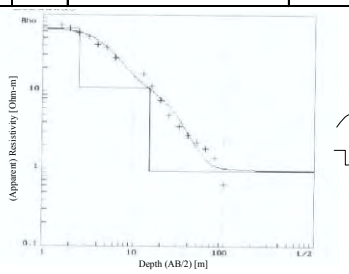
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Ng'ambo	Site No.	V-67-3
	Site Name	LESUUWA	Elevation	982
37N	UTM-E	174489	UTM-N	52789
	Latitude	0.476972	Longitude	36.075889

AB/2 (m)	Rho-a (Wm)
1.6	73.18
2	66.08
2.5	58.09
3.2	52.28
4	40.69
5	37.42
6.3	27.28
13	17.07
16	11.54
20	7.77
25	5
32	3.54
40	2.72
50	2.18
63	1.83
80	1.38
100	0.63



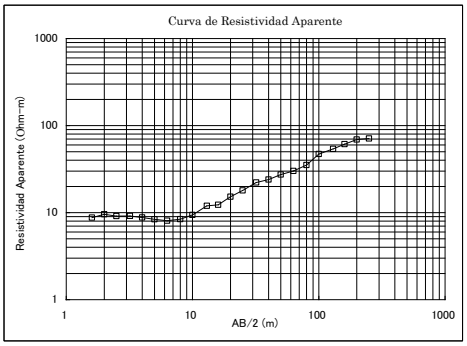
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
59	0 - 0.1	Dry top superficial layer/topo soil	Dry. No aquifers
66	0.1-2.5	Alluvial sediments/soils	Dry. No aquifers
11	2.5-15	Fine to medium grained sediments	Moist
1	>15	Clays/ lacustrine sediments	Aquiferous. Clays/ saline water saturated



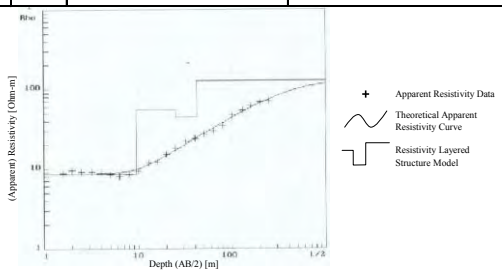
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Kimalel	Site No.	V-69
	Site Name	KAPKECHII	Elevation	1365
36N	UTM-E	818701	UTM-N	46467
	Latitude	0.419861	Longitude	35.862972

AB/2 (m)	Rho-a (Wm)
1.6	8.8
2.0	9.6
2.5	9.1
3.2	9.2
4.0	8.8
5.0	8.4
6.3	8.1
8.0	8.4
10.0	9.4
13.0	12.0
16.0	12.3
20.0	15.2
25.0	18.0
32.0	22.2
40.0	24.0
50.0	27.4
63.0	30.1
80.0	35.2
100.0	47.2
130.0	53.9
160.0	61.2
200.0	69.0
250.0	71.0



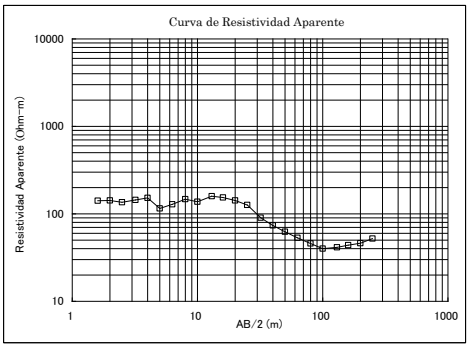
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
9	10	Dry top superficial layer	Dry.
56	25	Compact dry volcanic soils	Dry
44	42	Slightly weathered tuffs	Moist.
128	>42	Highly weathered and fractured tuffs	Aquifers expected in this layer



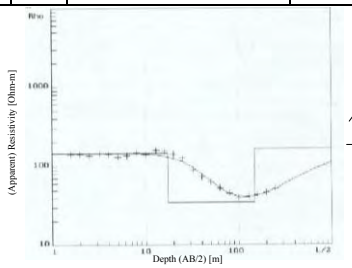
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Kimalel	Site No.	V-70
	Site Name	NGEMBOWARE (Loropil)	Elevation	1346
36N	UTM-E	822506	UTM-N	51622
	Latitude	0.466444	Longitude	35.897139

AB/2 (m)	Rho-a (Wm)
1.6	141.3
2.0	142.2
2.5	135.5
3.2	144.1
4.0	152.1
5.0	115.5
6.3	128.4
8.0	147.0
10.0	137.7
13.0	159.4
16.0	153.9
20.0	142.4
25.0	126.4
32.0	90.4
40.0	73.6
50.0	62.5
63.0	53.2
80.0	45.9
100.0	40.0
130.0	41.4
160.0	43.9
200.0	46.2
250.0	52.1



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
146	17.4	Dry top superficial layer	Dry.
35	150	Highly weathered and fractured tuffaceous	Aquifers expected in this layer
165	>150	Compact trachytic-phonolites	Dry

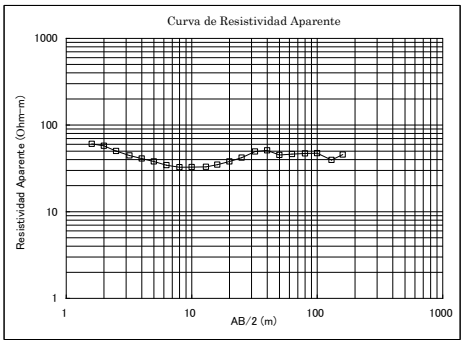


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

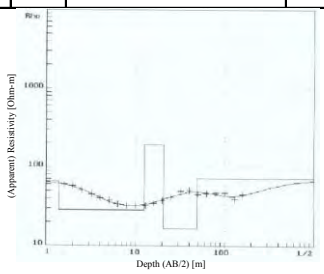
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Kimalel	Site No.	V-73
	Site Name	BARSIBET-KISAMISONCHUN	Elevation	2247
36N	UTM-E	821256	UTM-N	45144
	Latitude	0.407917	Longitude	35.885889

AB/2 (m)	Rho-a (Wm)
1.6	60.5
2.0	57.6
2.5	50.2
3.2	44.6
4.0	41.0
5.0	38.0
6.3	34.5
8.0	32.6
10.0	32.7
13.0	33.0
16.0	34.9
20.0	37.9
25.0	42.0
32.0	49.4
40.0	51.0
50.0	45.1
63.0	46.3
80.0	47.0
100.0	47.3
130.0	39.6
160.0	45.7



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
66	1.4	Dry top superficial layer	Dry.
29	13	Moist to dry volcanic soils	Moist
193	21	Compact tuffaceous materials	Moist.
17	49	Slightly weathered tuffs	Shallow aquifer may be present
71	>49	Highly weathered and fractured tuffs and trachytes	Aquifers expected in this layer

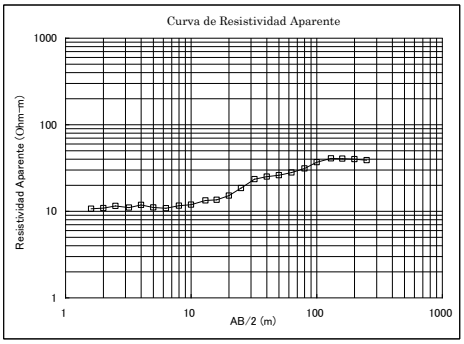


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

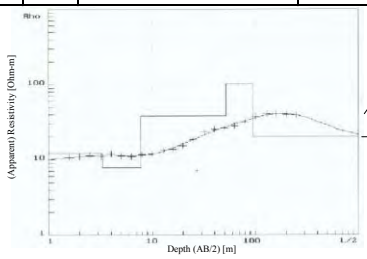
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Kimalel	Site No.	V-74
	Site Name	LOKOIWOPSONCHUN	Elevation	1336
36N	UTM-E	818662	UTM-N	51184
	Latitude	0.462528	Longitude	35.862639

AB/2 (m)	Rho-a (Wm)
1.6	10.7
2.0	10.9
2.5	11.5
3.2	11.0
4.0	11.8
5.0	11.1
6.3	10.8
8.0	11.6
10.0	11.9
13.0	13.4
16.0	13.6
20.0	15.2
25.0	18.5
32.0	23.5
40.0	25.2
50.0	26.1
63.0	28.1
80.0	31.2
100.0	36.9
130.0	40.9
160.0	40.6
200.0	40.0
250.0	38.9



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
9.3	0.6	Dry top superficial layer	Dry.
12	3.3	Moist to dry volcanic soils	Moist
8	8	Slightly weathered tuffaceous materials	Moist.
38	52	Slightly weathered trachytic phonolites	Shallow aquifer may be present
101	95	Slightly weathered and fractured tuffs and	Shallow aquifers expected in this layer
20	>95	Highly weathered and fractured tuffs and trachytes	Aquifers expected in this layer

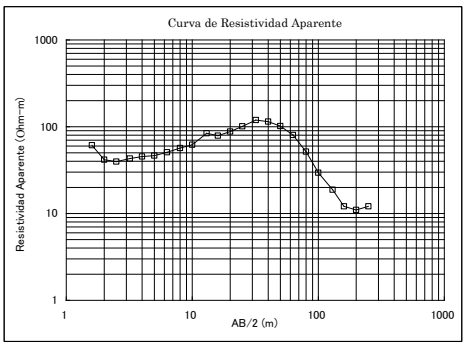


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

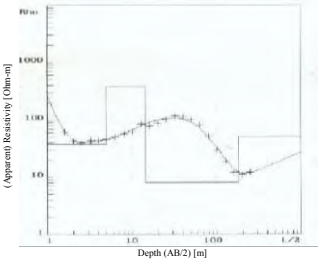
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Kimalel	Site No.	V-75
	Site Name	KINYOCH	Elevation	1339
36N	UTM-E	823214	UTM-N	50298
	Latitude	0.454472	Longitude	35.903472

AB/2 (m)	Rho-a (Wm)
1.6	61.1
2.0	41.7
2.5	39.7
3.2	43.0
4.0	45.3
5.0	46.5
6.3	50.7
8.0	56.8
10.0	62.1
13.0	84.1
16.0	78.9
20.0	87.9
25.0	100.9
32.0	119.5
40.0	114.4
50.0	101.7
63.0	80.1
80.0	51.6
100.0	29.5
130.0	18.8
160.0	12.1
200.0	11.0
250.0	12.1



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
2267	0.2	Exposed tuffaceous outcrops	Dry.
38	5	Moist to dry volcanic soils	Moist
380	14	Slightly weathered phonolitic materials	Moist.
8	180	Highly weathered and fractured tuffs and trachytes	Aquifers present in this layer
50	>180	Slightly weathered and fractured and trachytes	Deep aquifers expected .

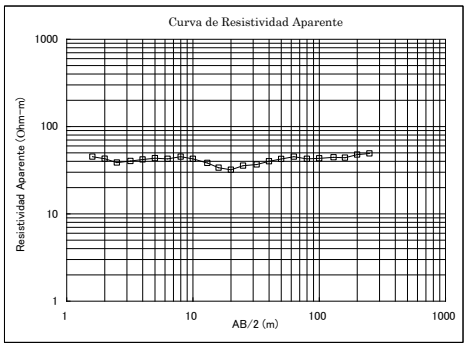


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

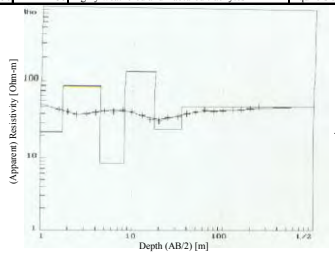
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Kimondis	Site No.	V-78
	Site Name	KIBINGOR	Elevation	1281
36N	UTM-E	819346	UTM-N	56478
	Latitude	0.510333	Longitude	35.868806

AB/2 (m)	Rho-a (Wm)
1.6	45.2
2.0	42.8
2.5	38.7
3.2	40.2
4.0	41.9
5.0	43.4
6.3	42.7
8.0	45.2
10.0	42.6
13.0	38.3
16.0	33.7
20.0	32.0
25.0	35.7
32.0	36.7
40.0	40.0
50.0	42.6
63.0	45.2
80.0	42.6
100.0	43.3
130.0	44.4
160.0	44.0
200.0	47.8
250.0	49.2



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
63	0.7	Dry top superficial layer	Dry.
22	2	Moist to dry volcanic soils	Moist
89	5	Slightly weathered tuffaceous materials	Moist.
8	8	Slightly weathered trachytes	Dry
132	18	Compact trachytes	No aquifer expected
24	35	Highly weathered tuffs	Shallow aquifer expected in this layer
50	>35	Highly weathered and fractured trachytes	Aquifers expected in this layer

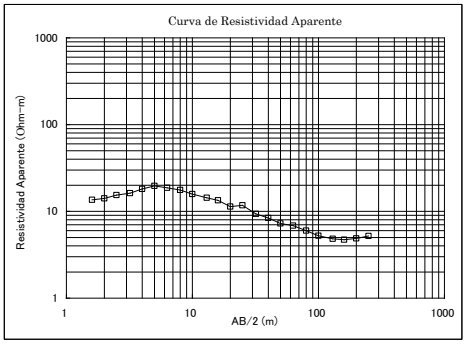


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

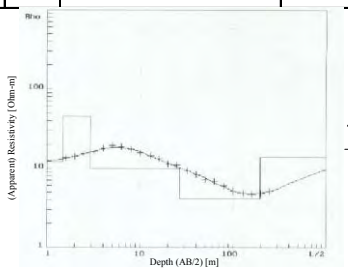
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Kimondis	Site No.	V-79
	Site Name	WOMBERENCHUN	Elevation	1222
36N	UTM-E	822128	UTM-N	55306
	Latitude	0.499722	Longitude	35.893722

AB/2 (m)	Rho-a (Wm)
1.6	13.6
2.0	14.1
2.5	15.4
3.2	16.2
4.0	18.1
5.0	19.7
6.3	18.7
8.0	17.6
10.0	15.8
13.0	14.4
16.0	13.4
20.0	11.3
25.0	11.7
32.0	9.3
40.0	8.4
50.0	7.3
63.0	6.8
80.0	6.0
100.0	5.2
130.0	4.8
160.0	4.7
200.0	4.9
250.0	5.2



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
12	1.5	Dry top superficial layer	Dry.
35	3	Moist to dry volcanic soils	Moist
10	27	Slightly weathered tuffaceous materials	Moist.
4	194	Highly weathered and fractured tuffs and trachytes	Aquifers expected in this layer
14	>194	Slightly weathered and fractured tuffs and	Deep aquifer may be present

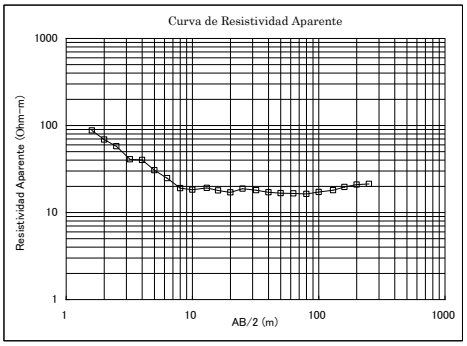


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

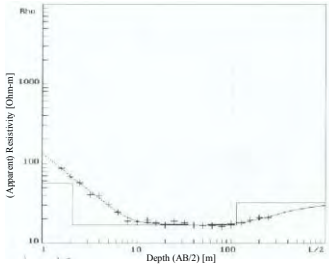
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Ewalel Soi	Site No.	V-81
	Site Name	KABUSA	Elevation	1190
36N	UTM-E	824132	UTM-N	59489
	Latitude	0.537500	Longitude	35.911750

AB/2 (m)	Rho-a (Wm)
1.6	87.7
2.0	68.9
2.5	57.7
3.2	40.8
4.0	40.1
5.0	30.7
6.3	24.8
8.0	19.1
10.0	18.3
13.0	19.2
16.0	17.9
20.0	17.0
25.0	18.8
32.0	18.0
40.0	17.1
50.0	16.7
63.0	16.6
80.0	16.4
100.0	17.2
130.0	18.0
160.0	19.6
200.0	20.9
250.0	21.3



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
218	0.5	Dry top superficial layer	Dry.
56	2	Moist to dry volcanic soils	Moist
17	115	Slightly weathered tuffs	Shallow aquifers expected in this layer.
33	>115	Highly weathered and fractured tuffs and trachytes	Deep aquifers expected in this layer

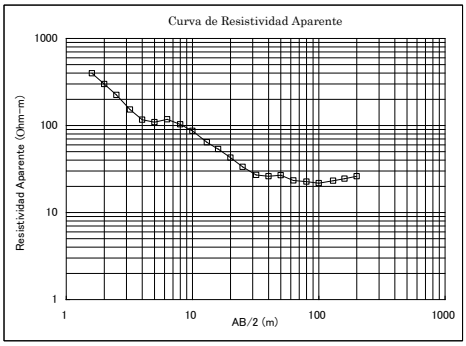


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

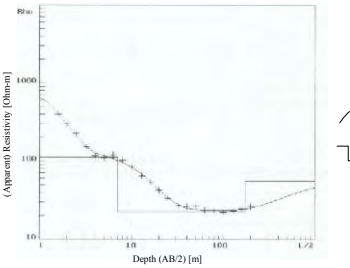
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Ewalel Soi	Site No.	V-82
	Site Name	BARSEMOI	Elevation	1262
36N	UTM-E	822239	UTM-N	62888
	Latitude	0.568250	Longitude	35.894778

AB/2 (m)	Rho-a (Wm)
1.6	397.9
2.0	298.5
2.5	224.1
3.2	152.3
4.0	116.3
5.0	109.2
6.3	117.8
8.0	103.2
10.0	86.7
13.0	64.1
16.0	53.6
20.0	42.7
25.0	33.5
32.0	27.1
40.0	26.1
50.0	26.8
63.0	23.4
80.0	22.6
100.0	21.8
130.0	23.2
160.0	24.5
200.0	26.1



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
905	0.7	Dry top superficial layer	Dry.
113	7	Moist to dry volcanic soils	Moist
22	176	Slightly weathered tuffs	Shallow aquifers expected in this layer.
56	>176	Highly weathered and fractured tuffs and trachytes	Deep aquifers expected in this layer

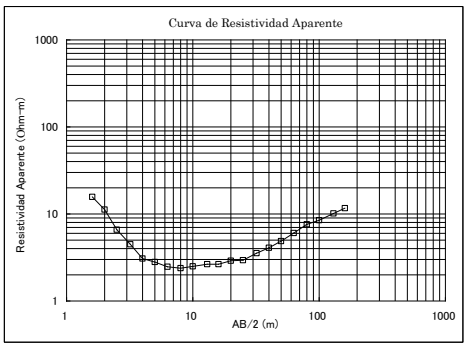


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

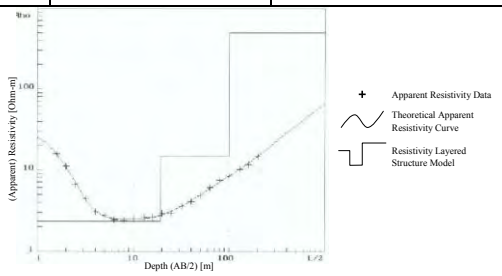
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Loboi	Site No.	V-83
	Site Name	KIWANJA NDEGE	Elevation	1002
37N	UTM-E	173809	UTM-N	39106
	Latitude	0.353333	Longitude	36.069833

AB/2 (m)	Rho-a (Wm)
1.6	15.7
2.0	11.2
2.5	6.6
3.2	4.5
4.0	3.1
5.0	2.8
6.3	2.5
8.0	2.4
10.0	2.5
13.0	2.7
16.0	2.7
20.0	2.9
25.0	2.9
32.0	3.5
40.0	4.1
50.0	4.9
63.0	6.0
80.0	7.6
100.0	8.5
130.0	10.1
160.0	11.7



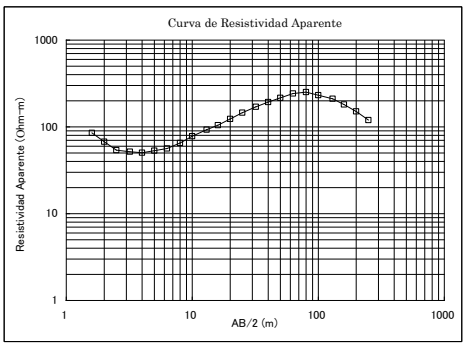
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
34	0.8	Dry top superficial layer	Dry.
2.4	19	Moist to dry volcanic soils	Moist
15	100	Slightly weathered tuffs	Shallow aquifers expected in this layer.
5000	>100	Compact tuffs and trachytes	No aquifers expected in this layer



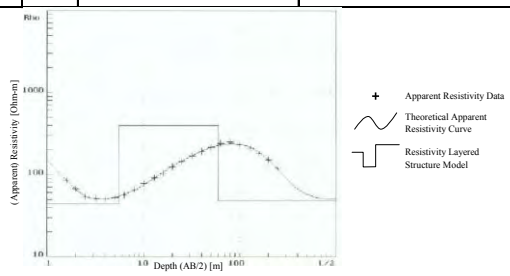
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Loboi	Site No.	V-84
	Site Name	CHELABA	Elevation	1226
37N	UTM-E	170797	UTM-N	37054
	Latitude	0.334806	Longitude	36.042806

AB/2 (m)	Rho-a (Wm)
1.6	85.4
2.0	67.4
2.5	54.0
3.2	51.8
4.0	50.4
5.0	53.2
6.3	56.4
8.0	65.3
10.0	78.0
13.0	92.7
16.0	104.4
20.0	123.4
25.0	145.8
32.0	170.3
40.0	192.8
50.0	216.3
63.0	242.2
80.0	251.5
100.0	232.0
130.0	210.8
160.0	181.0
200.0	150.6
250.0	119.7



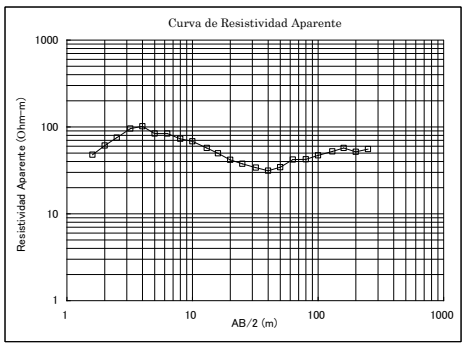
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
276	0.5	Dry top superficial layer	Dry.
44	6	Moist to dry volcanic soils	Moist
395	60	Compact trachytes	No aquifers expected in this layer.
49	>60	Highly weathered and fractured tuffs and trachytes	Deep aquifers expected in this layer



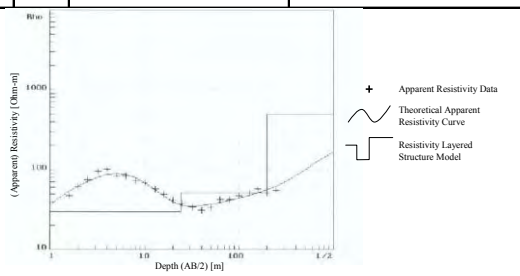
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Sandai	Site No.	V-86-1
	Site Name	SAMURAN	Elevation	1125
37N	UTM-E	178956	UTM-N	40952
	Latitude	0.370028	Longitude	36.116028

AB/2 (m)	Rho-a (Wm)
1.6	47.9
2	61.1
2.5	75.3
3.2	95.7
4	101.8
5	84
6.3	84
8	73
10	68.3
13	57.2
16	49.7
20	41.8
25	37.7
32	34
40	31.4
50	34.3
63	42.1
80	42.3
100	47
130	52.2
160	57.2
200	51.8
250	55.6



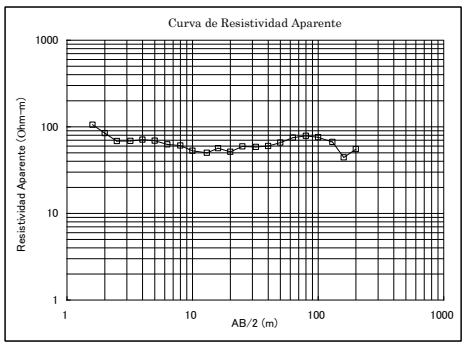
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
14	0 -0.4	Dry top superficial layer and fractured tuff.	Dry. No aquifers
1275	0.4-0.7	Slightly weathered and fractured tuff	No potential aquifers
30	0.7-24	Highly weathered and fractured basalts rocks.	Aquiferous
52	24-200	Highly weathered and fractured basalts rocks.	Aquiferous
500	>200	Slightly weathered / compact basalt	Not aquiferous



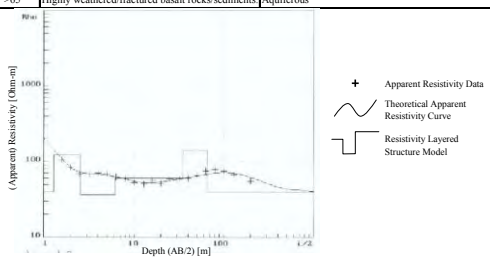
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Sandai	Site No.	V-86-2
	Site Name	SAMURAN	Elevation	1151
37N	UTM-E	178222	UTM-N	40875
	Latitude	0.369333	Longitude	36.109556

AB/2 (m)	Rho-a (Wm)
1.6	105.6
2	84.33
2.5	68.4
3.2	68.6
4	71
5	69
6.3	62.7
8	60.71
10	52.78
13	50.14
16	56.54
20	51.4
25	59.4
32	58.44
40	60
50	65.71
63	74.9
80	78.5
100	75.7
130	66.9
160	44.3
200	55.3



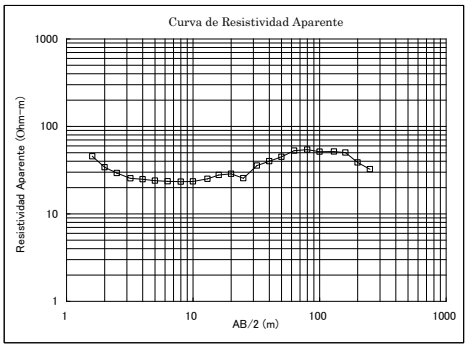
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
378	0 -0.5	Thin dry top superficial layer	Dry.
40	0.5-1.3	Slightly weathered/fractured tuffsand phonolites	Dry. No aquifers
123	1.3-3	Slightly weathered & fractured tuffs and	Dry. No aquifers
36	06-3	Slightly weathered and fractured tuff	Moist.
60	6-35	Weathered and fractured tuff	Shallow aquifer
139	35-65	Slightly weathered and fractured basalt	Aquiferous
40	>65	Highly weathered/fractured basalt rocks/sediments.	Aquiferous



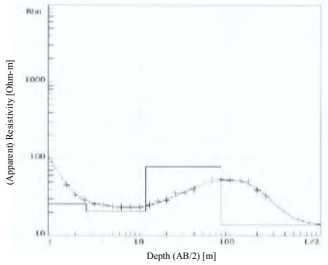
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Marigat
	Location	Sandai	Site No.	V-86-3
	Site Name	SAMURAN	Elevation	1165
37N	UTM-E	177783	UTM-N	40653
	Latitude	0.367333	Longitude	36.105500

AB/2 (m)	Rho-a (Wm)
1.6	45.47
2	34.1
2.5	29.28
3.2	25.53
4	24.9
5	24
6.3	23.55
8	23.36
10	23.54
13	25.12
16	27.88
20	28.7
25	25.6
32	35.7
40	40
50	44.9
63	52.9
80	54.3
100	51.4
130	51.7
160	50.2
200	38.7
250	32.43



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
299	0 - 0.4	Dry superficial layer and fractured trachytes and	Dry. No aquifers
25	0.4-2.6	Slightly weathered and fractured trachyte and tuff	Moist.
21	2.6-12	Weathered and fractured trachytes	Moist
78	12-80	Slightly weathered/fractured trachytes and basalts	Aquiferous
14	>80	Highly weathered/ fractured basalt and sediments	Deep aquifers expected

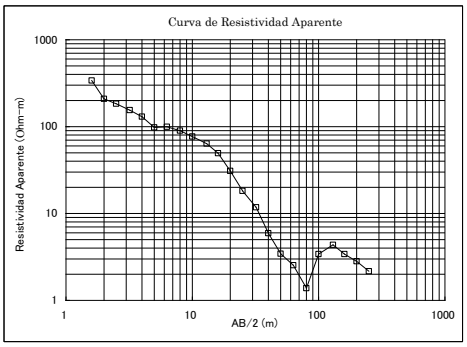


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

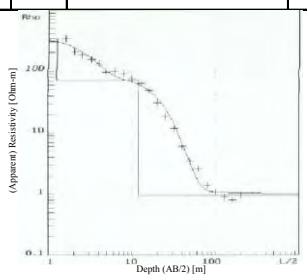
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Mukutani
	Location	Kiserian	Site No.	V-87
	Site Name	MOSURO	Elevation	1006
37N	UTM-E	178543	UTM-N	58152
	Latitude	0.525472	Longitude	36.112278

AB/2 (m)	Rho-a (Wm)
1.6	339.7
2.0	208.5
2.5	183.6
3.2	154.9
4.0	130.4
5.0	97.7
6.3	99.7
8.0	89.9
10.0	76.8
13.0	63.7
16.0	49.4
20.0	30.9
25.0	18.2
32.0	11.8
40.0	5.9
50.0	3.4
63.0	2.3
80.0	1.4
100.0	3.4
130.0	4.4
160.0	3.4
200.0	2.8
250.0	2.2



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
337	1.3	Dry top superficial layer	Dry.
72	12	Moist to dry volcanic soils	Moist
1	>12	Highly weathered and fractured tuffs and trachytes	Aquifers expected in this layer

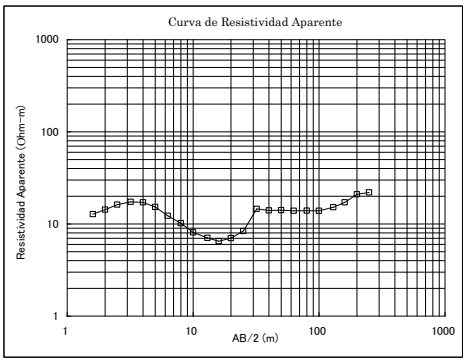


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

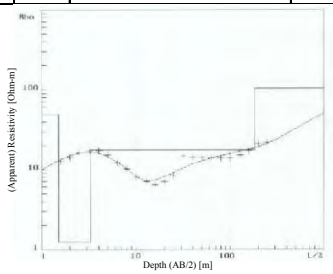
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Mukutani
	Location	Kiserian	Site No.	V-88
	Site Name	LOGUMGUM	Elevation	983
37N	UTM-E	175393	UTM-N	49602
	Latitude	0.448167	Longitude	36.084028

AB/2 (m)	Rho-a (Wm)
1.6	12.8
2.0	14.3
2.5	16.2
3.2	17.4
4.0	17.2
5.0	15.3
6.3	12.3
8.0	10.2
10.0	8.1
13.0	7.1
16.0	6.5
20.0	7.0
25.0	8.4
32.0	14.6
40.0	14.1
50.0	14.1
63.0	13.9
80.0	14.0
100.0	13.9
130.0	15.2
160.0	17.2
200.0	21.0
250.0	22.0



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
50	1.5	Dry top superficial layer	Dry.
12	3.2	Moist to dry volcanic soils	Moist
18	180	Compact tuffs	No aquifers expected in this layer.
100	>180	Highly weathered and fractured tuffs and trachytes	Deep aquifers expected in this layer

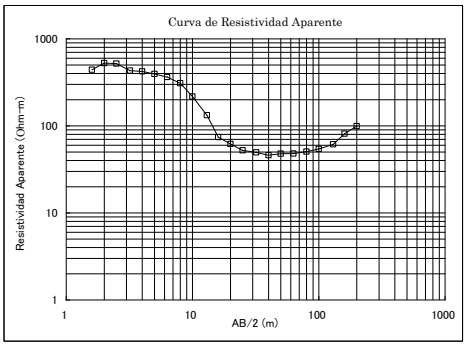


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

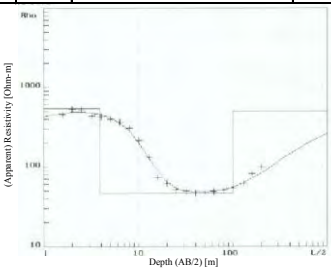
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Mochongoi
	Location	Mochongoi	Site No.	V-89
	Site Name	MCHONGOI CENTRE	Elevation	2219
37N	UTM-E	187629	UTM-N	33681
	Latitude	0.304333	Longitude	36.193889

AB/2 (m)	Rho-a (Wm)
1.6	442.1
2.0	526.3
2.5	518.9
3.2	431.4
4.0	422.2
5.0	395.2
6.3	364.6
8.0	309.0
10.0	217.5
13.0	132.5
16.0	74.2
20.0	62.0
25.0	52.3
32.0	49.6
40.0	46.0
50.0	48.0
63.0	48.0
80.0	50.5
100.0	54.3
130.0	61.4
160.0	81.2
200.0	99.3



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
332	0.4	Dry top superficial layer	Dry.
544	4	Dry volcanic soils	Dry
46	100	Highly weathered and fractured trachytes	Aquifers expected in this layer
500	>100	Compact basalts	Deep aquifers expected in this layer

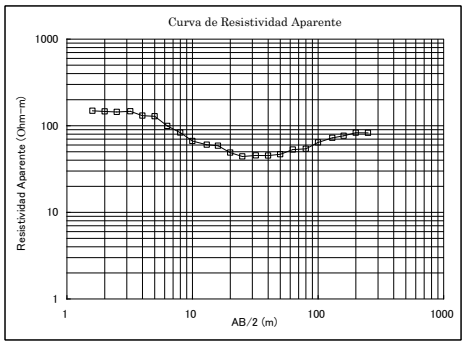


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

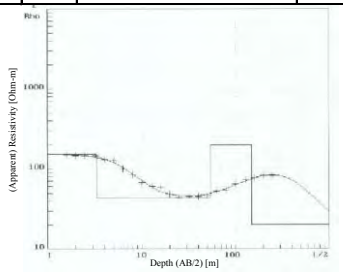
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Mochongoi
	Location	Mochongoi	Site No.	V-92
	Site Name	KIPKANDULE	Elevation	2251
37N	UTM-E	189380	UTM-N	31397
	Latitude	0.283639	Longitude	36.209611

AB/2 (m)	Rho-a (Wm)
1.6	148.8
2.0	146.0
2.5	144.2
3.2	146.6
4.0	130.7
5.0	128.5
6.3	99.2
8.0	83.2
10.0	66.7
13.0	60.4
16.0	58.6
20.0	48.9
25.0	44.1
32.0	45.4
40.0	45.2
50.0	46.8
63.0	53.0
80.0	54.1
100.0	64.1
130.0	72.4
160.0	76.4
200.0	83.0
250.0	82.7



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
153	3.3	Dry top superficial layer	Dry.
43	54	Moist to dry volcanic soils	Moist
200	150	Compact tuffs	No aquifers expected in this layer.
20	>150	Highly weathered and fractured tuffs and trachytes	Deep aquifers expected in this layer



+ Apparent Resistivity Data

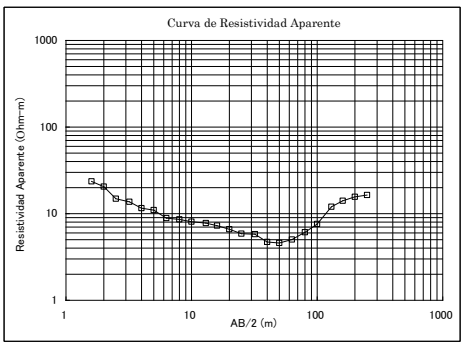
Theoretical Apparent Resistivity Curve

Resistivity Layered Structure Model

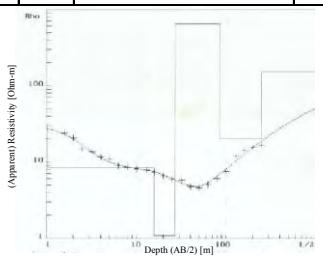
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Mochongoi
	Location	Chebinyiny	Site No.	V-94
	Site Name	SAMBAKA	Elevation	985
37N	UTM-E	183733	UTM-N	33303
	Latitude	0.300917	Longitude	36.158944

AB/2 (m)	Rho-a (Wm)
1.6	23.6
2.0	20.5
2.5	14.9
3.2	13.7
4.0	11.6
5.0	11.0
6.3	8.9
8.0	8.6
10.0	8.1
13.0	7.8
16.0	7.3
20.0	6.6
25.0	5.9
32.0	5.8
40.0	4.7
50.0	4.6
63.0	5.0
80.0	6.1
100.0	7.6
130.0	12.0
160.0	14.1
200.0	15.6
250.0	16.4



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
30	1	Dry top superficial layer	Dry.
8	16	Dry volcanic soils	Dry
1	27	Loose volcanic soils	No aquifers expected in this layer
646	85	Compact trachytes and tuffs	No aquifers expected in this layer
20	250	Highly weathered and fractured tuffs and trachytes	Aquiferous
152	>250	Slightly weathered and fractured trachytes	Not aquiferous



+ Apparent Resistivity Data

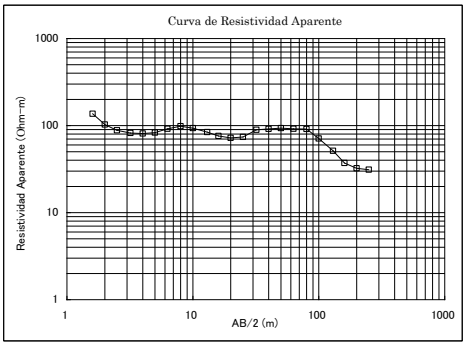
Theoretical Apparent Resistivity Curve

Resistivity Layered Structure Model

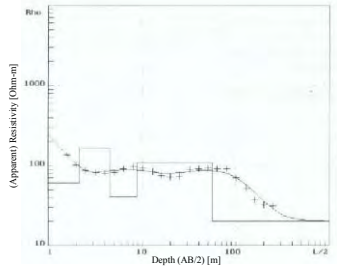
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Mochongoi
	Location	Arabal	Site No.	V-96
	Site Name	SOKONIN	Elevation	982
37N	UTM-E	191702	UTM-N	59303
	Latitude	0.535917	Longitude	36.230361

AB/2 (m)	Rho-a (Wm)
1.6	136.7
2.0	102.8
2.5	88.2
3.2	82.3
4.0	81.0
5.0	82.9
6.3	91.9
8.0	98.2
10.0	93.6
13.0	84.2
16.0	76.0
20.0	72.2
25.0	74.0
32.0	89.5
40.0	91.5
50.0	93.5
63.0	91.7
80.0	91.3
100.0	70.9
130.0	51.3
160.0	37.2
200.0	32.3
250.0	31.1



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
444	0.5	Exposed trachytes	Dry.
60	2.2	Loose volcanic soils	Dry
165	4.5	Dry volcanic soils	Dry
41	9	Slightly weathered and fractured tuffs	Shallow aquifer expected
109	56	Compact trachytes and tuffs	Dry
20	>56	Highly weathered trachytes	Aquiferous



+ Apparent Resistivity Data

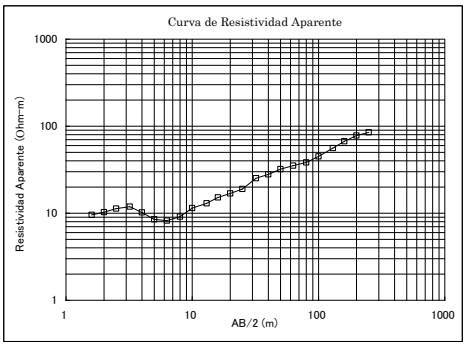
Theoretical Apparent Resistivity Curve

Resistivity Layered Structure Model

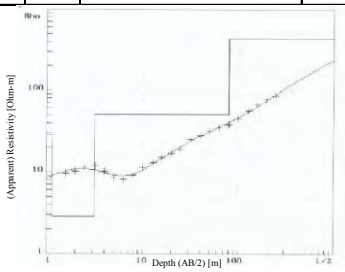
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Mochongoi
	Location	Arabal	Site No.	V-97
	Site Name	PARTALO	Elevation	1110
37N	UTM-E	182477	UTM-N	59043
	Latitude	0.533500	Longitude	36.147556

AB/2 (m)	Rho-a (Wm)
1.6	9.6
2.0	10.3
2.5	11.3
3.2	11.9
4.0	10.2
5.0	8.5
6.3	8.2
8.0	9.1
10.0	11.5
13.0	13.0
16.0	15.2
20.0	16.9
25.0	19.0
32.0	25.2
40.0	27.9
50.0	32.1
63.0	35.2
80.0	38.3
100.0	45.0
130.0	56.0
160.0	67.0
200.0	78.0
250.0	85.0



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
4.8	0.4	Dry top superficial layer	Dry.
29	1.2	Dry volcanic soils	Dry
3	3.2	Loose volcanic soils	Dry
51	80	Highly weathered and fractured trachytes	Shallow aquifer expected
434	>80	Compact trachytes	Deep aquifer expected



+ Apparent Resistivity Data

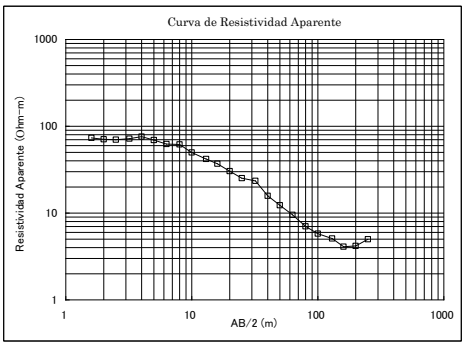
Theoretical Apparent Resistivity Curve

Resistivity Layered Structure Model

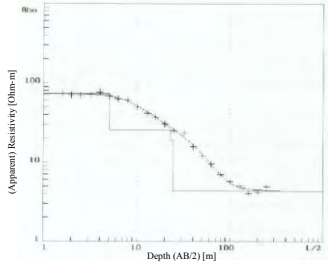
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Marigat	Division	Mochongoi
	Location	Arabal	Site No.	V-98
	Site Name	MENMENO	Elevation	1333
37N	UTM-E	189076	UTM-N	51048
	Latitude	0.461306	Longitude	36.206833

AB/2 (m)	Rho-a (Wm)
1.0	73.4
2.0	70.8
2.5	70.1
3.2	71.9
4.0	76.0
5.0	69.4
6.3	62.5
8.0	61.8
10.0	50.0
13.0	42.0
16.0	37.0
20.0	30.4
25.0	25.3
32.0	23.5
40.0	15.8
50.0	12.3
63.0	9.5
80.0	7.0
100.0	5.8
130.0	5.1
160.0	4.1
200.0	4.2
250.0	5.0



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
73	5.7	Dry top superficial layer	Dry.
22	28	Moist to dry volcanic soils	Moist
3.5	200	Highly weathered and fractured tuffs	Major aquifers expected in this layer.
50	>200	Slightly weathered and fractured tuffs and	Deep aquifers expected in this layer

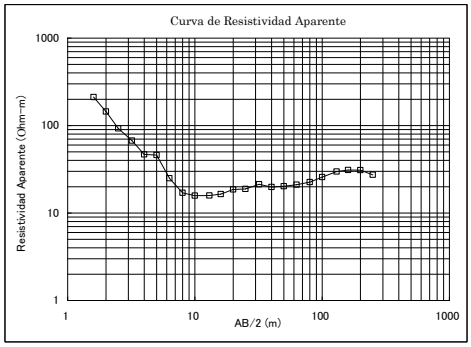


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

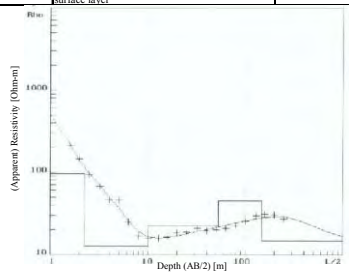
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Salawa
	Location	Lelmen	Site No.	V-101
	Site Name	KAPTARA	Elevation	1093
36N	UTM-E	794804	UTM-N	60861
	Latitude	0.550028	Longitude	35.648500

AB/2 (m)	Rho-a (Wm)
1.6	211.3
2.0	144.9
2.5	92.9
3.2	67.2
4.0	46.7
5.0	46.0
6.3	25.0
8.0	17.0
10.0	15.8
13.0	15.8
16.0	16.5
20.0	18.6
25.0	18.9
32.0	21.2
40.0	19.3
50.0	20.3
63.0	21.1
80.0	22.6
100.0	25.8
130.0	29.8
160.0	31.0
200.0	30.9
250.0	27.4



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
1138	0.5	Exposed trachytes	Dry.
95	2.2	Dry volcanic soils	Dry.
13	10	Moist to dry volcanic soils	Moist.
23	53	Slightly weathered and fractured phonolites	Aquiferous layer
45	150	Fractured and weathered basalts	Aquiferous.
15	>150	Highly fractured and weathered basalts and old surface layer	Deep aquifer expected in this layer

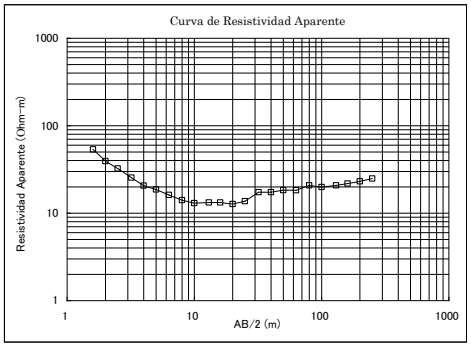


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

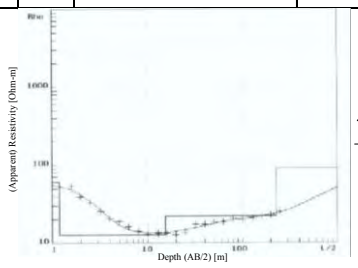
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Salawa
	Location	Lelmen	Site No.	V-103-1
	Site Name	KAKWANE	Elevation	1104
36N	UTM-E	791863	UTM-N	57313
	Latitude	0.517972	Longitude	35.622083

AB/2 (m)	Rho-a (Wm)
1.6	53.57
2.0	39.29
2.5	32.43
3.2	25.52
4.0	20.69
5.0	18.67
6.3	16.17
8.0	14.1
10.0	13.05
13.0	13.25
16.0	13.25
20.0	12.73
25.0	13.72
32.0	17.39
40.0	17.4
50.0	18.32
63.0	18.29
80.0	20.79
100.0	19.91
130.0	20.79
160.0	21.78
200.0	23.08
250.0	24.88



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
60	0 -1.1	Dry top superficial layer and fractured trachytes.	Dry. No aquifers
13	1.1-16	Slightly weathered and fractured trachyphonolites	No aquifers
22	16-231	Medium to coarse grained sediments, pyroclastics & basalts	Aquiferous layer
90	>231	Highly weathered and fractured basalts rocks.	Aquiferous

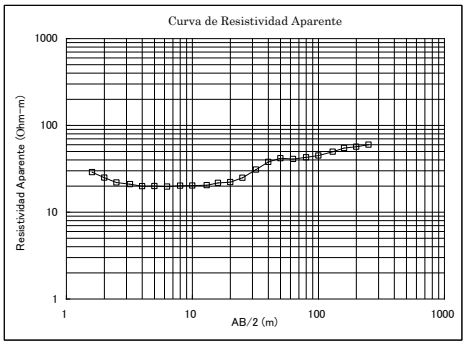


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

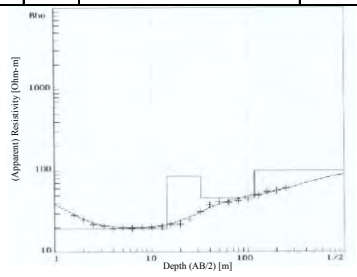
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Salawa
	Location	Lelmen	Site No.	V-103-2
	Site Name	KAKWANE	Elevation	1117
36N	UTM-E	792561	UTM-N	57498
	Latitude	0.519639	Longitude	35.628361

AB/2 (m)	Rho-a (Wm)
1.6	28.89
2.0	24.99
2.5	21.99
3.2	20.98
4.0	19.9
5.0	19.99
6.3	19.72
8.0	20.2
10.0	20.28
13.0	20.46
16.0	21.76
20.0	22.18
25.0	24.89
32.0	30.97
40.0	37.89
50.0	41.8
63.0	40.98
80.0	42.9
100.0	44.91
130.0	49.74
160.0	54.8
200.0	56.69
250.0	59.94



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
54	0 -0.54	Thin dry top superficial layer	Dry. No aquifers
19	0.54-15	Slightly weathered and fractured trachyphonolites	Moist.
85	15-32	Dry sediments, pyroclastics	No aquifers layer
46	32-118	Coarse sediments/highly weathered pyroclastics/ basalts	Aquiferous
100	>118	Weathered basalt	Aquiferous

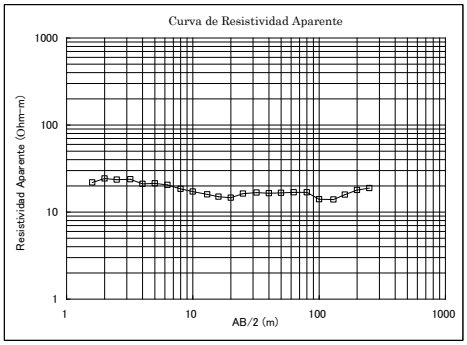


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

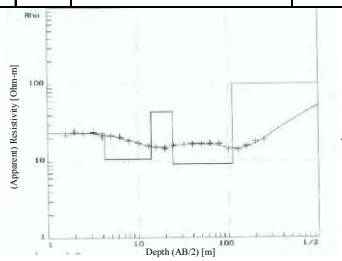
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Salawa
	Location	Lelmen	Site No.	V-103-3
	Site Name	KAKWANE	Elevation	1111
36N	UTM-E	792945	UTM-N	57550
	Latitude	0.520111	Longitude	35.631806

AB/2 (m)	Rho-a (Wm)
1.6	21.92
2.0	24.31
2.5	23.61
3.2	23.83
4.0	21.09
5.0	21.39
6.3	20.49
8.0	18.46
10.0	17.18
13.0	15.95
16.0	15.02
20.0	14.62
25.0	16.27
32.0	16.74
40.0	16.49
50.0	16.61
63.0	16.83
80.0	16.86
100.0	14.05
130.0	13.92
160.0	15.86
200.0	17.91
250.0	18.84



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
23	0 - 4.3	Dry top superficial layer and fractured trachytes.	Dry. No aquifers
11	4.3 -14	Slightly weathered and fractured trachyphonolites	Moist.
44	14-24	Coarse sediments	No aquifers
9	24-111	Clay/silty sediments. Decomposed pyroclastics/basalts	Aquiferous
100	>111	Slightly weathered to compact trachyphonolites	No aquifers expected

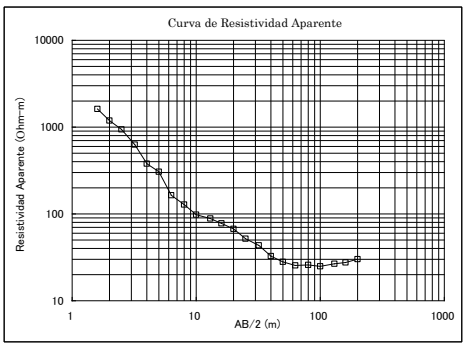


+ Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

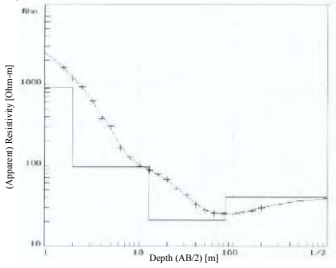
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Salawa
	Location	Salawa	Site No.	V-104
	Site Name	SALAWA HOSPITAL	Elevation	1161
36N	UTM-E	796226	UTM-N	54974
	Latitude	0.496833	Longitude	35.661250

AB/2 (m)	Rho-a (Wm)
1.6	1,619.0
2.0	1,189.4
2.5	940.0
3.2	628.0
4.0	379.2
5.0	306.5
6.3	163.9
8.0	128.0
10.0	98.0
13.0	88.6
16.0	77.8
20.0	67.2
25.0	51.7
32.0	43.5
40.0	32.7
50.0	28.1
63.0	25.5
80.0	25.8
100.0	24.9
130.0	26.6
160.0	27.6
200.0	30.1



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
3509	0.6	Exposed compact trachytes	Dry.
919	2	Dry compact volcanic soils	Dry
95	13	Moist to dry volcanic soils	Moist
21	83	Slightly weathered and fractured phonolites.	Shallow aquiferous layer
40	>83	Fractured and weathered basalts and old surface	Aquiferous.

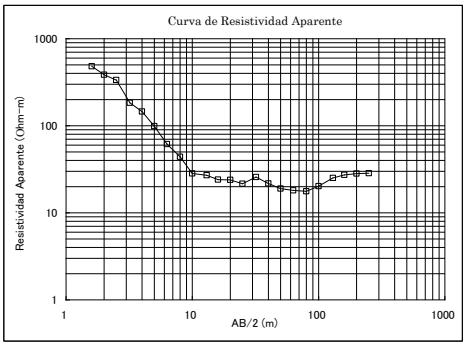


+ Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

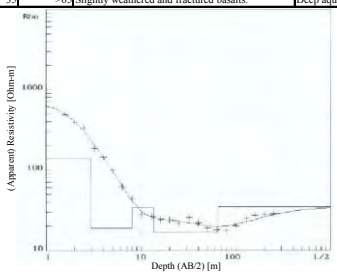
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Salawa
	Location	Kabarnet Soi	Site No.	V-106
	Site Name	ERON PRIMARY	Elevation	1195
36N	UTM-E	797910	UTM-N	53352
	Latitude	0.482167	Longitude	35.676361

AB/2 (m)	Rho-a (Wm)
1.6	482.0
2.0	385.9
2.5	335.8
3.2	183.4
4.0	145.5
5.0	99.0
6.3	61.6
8.0	44.0
10.0	28.3
13.0	27.0
16.0	24.1
20.0	23.9
25.0	21.6
32.0	25.8
40.0	21.8
50.0	19.0
63.0	18.1
80.0	17.7
100.0	20.3
130.0	25.2
160.0	27.3
200.0	28.2
250.0	28.6



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
717	1	Exposed trachytes	Dry.
139	3	Dry volcanic soils	Dry
19	8	Moist to dry volcanic soils	Moist
34	14	Slightly weathered and fractured phonolites.	Shallow aquiferous layer
17	65	Highly fractured and weathered phonolites and old surface layer.	Aquiferous.
35	>65	Slightly weathered and fractured basalts.	Deep aquifers expected

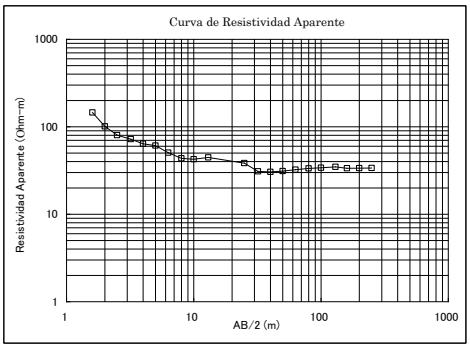


+ Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

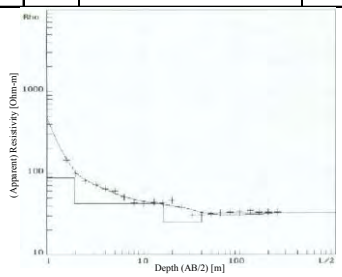
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Salawa
	Location	Kabarnet Soi	Site No.	V-107
	Site Name	KIMOSO	Elevation	1301
36N	UTM-E	800899	UTM-N	55032
	Latitude	0.497306	Longitude	35.703167

AB/2 (m)	Rho-a (Wm)
1.6	145.9
2.0	101.1
2.5	80.3
3.2	72.2
4.0	64.0
5.0	61.0
6.3	50.6
8.0	43.6
10.0	42.6
13.0	44.6
25.0	38.4
32.0	30.9
40.0	30.5
50.0	31.2
63.0	32.4
80.0	33.5
100.0	34.0
130.0	34.9
160.0	33.6
200.0	33.7
250.0	33.7



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
2169	0.3	Exposed trachytes	Dry.
87	2	Dry volcanic soils	Dry
42	16	Moist to dry volcanic soils	Moist
25	40	Slightly weathered and fractured phonolites.	Shallow aquiferous layer
33	>40	Highly fractured and weathered basalts and old land surface layer.	Aquiferous.

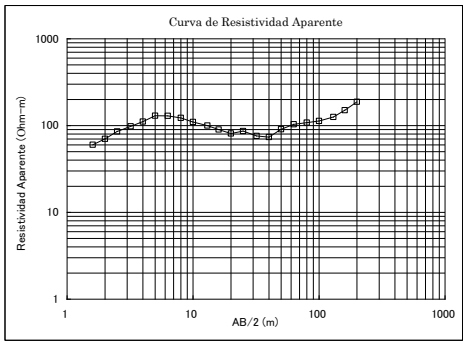


+ Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

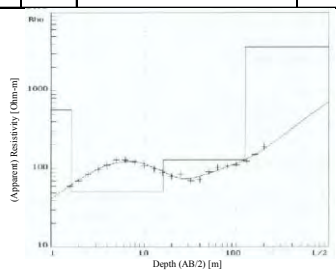
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Salawa
	Location	Kiboino	Site No.	V-109
	Site Name	OINOBMOI	Elevation	1257
36N	UTM-E	796835	UTM-N	51058
	Latitude	0.461417	Longitude	35.666694

AB/2 (m)	Rho-a (Wm)
1.6	60.2
2.0	70.3
2.5	85.6
3.2	98.1
4.0	111.0
5.0	130.0
6.3	129.4
8.0	122.6
10.0	110.0
13.0	100.0
16.0	90.0
20.0	81.1
25.0	86.4
32.0	75.9
40.0	73.8
50.0	90.7
63.0	103.4
80.0	108.1
100.0	112.8
130.0	125.3
160.0	150.4
200.0	188.0



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
21	0.5	Dry top superficial layer	Dry.
566	1.6	Dry volcanic soils	Dry
51	16	Slightly weathered trachytes	Dry
131	125	Highly weathered and fractured tuffs and trachytes	Shallow aquifer expected
3676	>125	Fresh compact trachytes	No aquifers expected

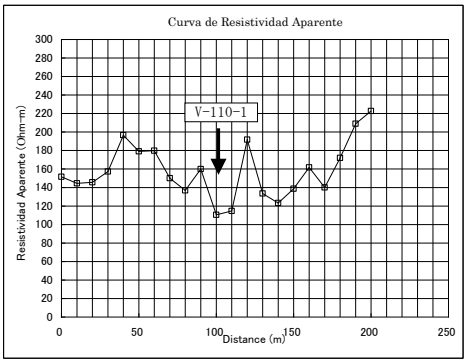


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

Horizontal Electric Profiling Datasheet (Wenner)

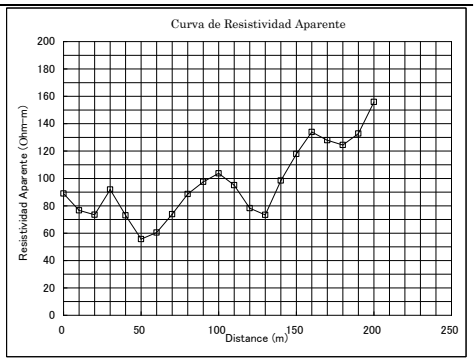
	District	Baringo	Division	Salawa
	Location	Kiboino	Site No.	HEP-110-1
	Site Name	KAPSIKORYAN	Elevation	1676
Start Point	Latitude	0.486917	Longitude	35.706639
End Point	Latitude	0.486778	Longitude	35.708111

Distance (m)	Rho-a (Wm)
0	151.57
10	144.53
20	145.66
30	157.23
40	196.56
50	179.09
60	179.8
70	150.08
80	136.9
90	159.9
100	110.47
110	114.62
120	191.66
130	133.59
140	123.29
150	138.73
160	161.78
170	140.08
180	171.98
190	208.9
200	222.72



	Location	Kiboino	Site No.	HEP-110-1
	Site Name	KAPSIKORYAN	Elevation	1678
Start Point	Latitude	0.486306	Elevation	35.71108333
End Point	Latitude	0.485972	Longitude	35.712139

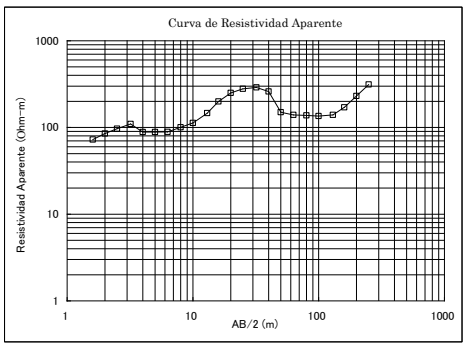
Distance (m)	Rho-a (Wm)
0	88.98
10	76.66
20	73.52
30	91.87
40	72.98
50	55.67
60	60.45
70	73.89
80	88.61
90	97.5
100	103.72
110	95.1
120	78.29
130	73.41
140	98.45
150	117.89
160	133.91
170	127.96
180	124.41
190	132.82
200	155.88



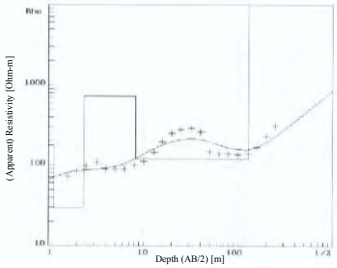
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Salawa
	Location	Kiboino	Site No.	V-110-1
	Site Name	KAPSIKORYAN	Elevation	1682
36N	UTM-E	801371	UTM-N	53867
	Latitude	0.486806	Longitude	35.707417

AB/2 (m)	Rho-a (Wm)
1.6	72.6
2.0	85.2
2.5	96.88
3.2	109.9
4.0	88.65
5.0	88.68
6.3	88.78
8.0	100.4
10.0	112.8
13.0	146.28
16.0	199.14
20.0	250.36
25.0	279.12
32.0	290.08
40.0	259.85
50.0	150.07
63.0	139.86
80.0	137.94
100.0	135.42
130.0	139.45
160.0	170.51
200.0	231.11
250.0	312.83



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
32	0 -0.3	Dry top superficial layer	Dry. No aquifers
177	0.3-1.1	Slightly weathered trachyphonolites	Dry. No aquifer
30	1.1 – 2.4	Highly weathered trachyphonolites	No aquifer
729	2.4 – 8.3	Compact hard trachyphonolites	No aquifer
120	8.3 - 130	Slightly weathered/ fractured trachyphonolites	Aquifer
10000	>130	Compact fresh trachyphonolites	No aquifer

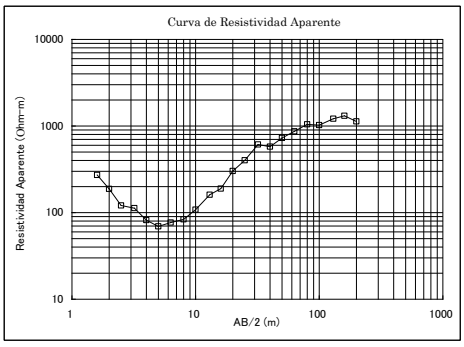


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

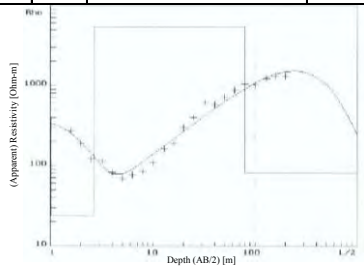
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Salawa
	Location	Kiboino	Site No.	V-110-2
	Site Name	KAPSIKORYAN	Elevation	
36N	UTM-E	801822	UTM-N	53783
	Latitude	0.486056	Longitude	35.711472

AB/2 (m)	Rho-a (Wm)
1.6	272.25
2	187.85
2.5	121.07
3.2	112.72
4	81.87
5	69.24
6.3	76.88
8	83.6
10	108.29
13	160.59
16	189.5
20	302.4
25	401.8
32	611.8
40	578
50	727.13
63	868.2
80	1046.7
100	1022.8
130	1211.6
160	1312.2
200	1130.12



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
392	0 - 1	Dry top superficial layer	Dry. No aquifers
24	1 – 2.7	Slightly weathered trachyphonolites	Moist.
5437	2.7 - 80	Compact hard trachyphonolites	No aquifer
79	>80	Highly weathered/fractured trachyphonolites	Aquiferous layer

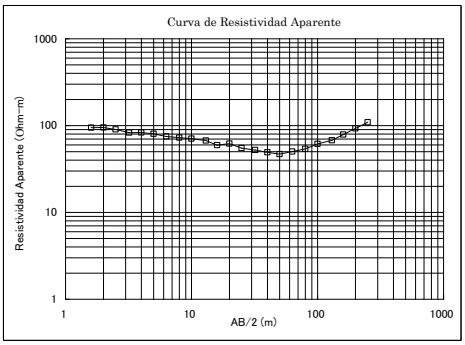


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

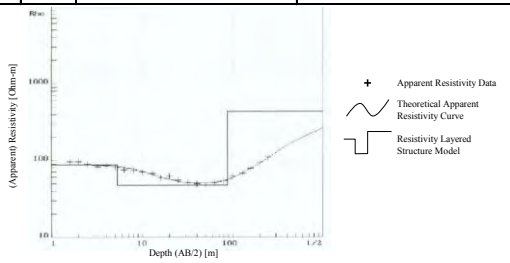
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Salawa
	Location	Kiboino	Site No.	V-111
	Site Name	KOROMBOPSOO	Elevation	1258
36N	UTM-E	799674	UTM-N	46946
	Latitude	0.424250	Longitude	35.692167

AB/2 (m)	Rho-a (Wm)
1.6	94.7
2.0	95.1
2.5	90.4
3.2	82.9
4.0	83.2
5.0	80.5
6.3	75.0
8.0	72.8
10.0	70.7
13.0	67.4
16.0	59.4
20.0	62.0
25.0	55.0
32.0	52.2
40.0	49.2
50.0	47.0
63.0	50.2
80.0	53.9
100.0	61.7
130.0	67.8
160.0	79.0
200.0	92.7
250.0	109.4



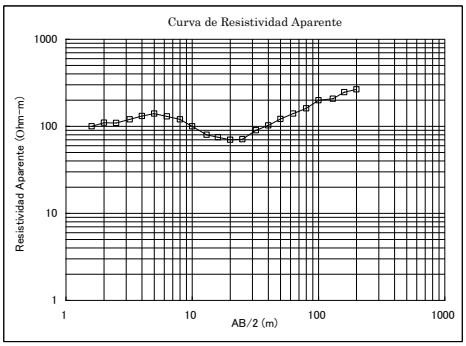
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
88	5.3	Dry top superficial layer	Dry.
47	88	Slightly weathered phonolites	Shallow aquiferous layer
431	>88	Compact basalts	No aquifers expected in this layer.



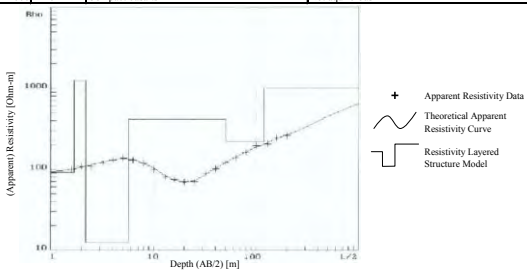
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Salawa
	Location	Kiboino	Site No.	V-112
	Site Name	SIRUNDI PRIMARY SCHOOL	Elevation	
36N	UTM-E	801275	UTM-N	51958
	Latitude	0.469556	Longitude	35.706556

AB/2 (m)	Rho-a (Wm)
1.6	100.0
2.0	110.0
2.5	109.2
3.2	120.2
4.0	131.0
5.0	140.0
6.3	130.0
8.0	120.0
10.0	100.0
13.0	80.0
16.0	75.0
20.0	70.0
25.0	71.0
32.0	90.0
40.0	102.3
50.0	121.3
63.0	140.1
80.0	161.0
100.0	198.9
130.0	207.4
160.0	246.3
200.0	265.2



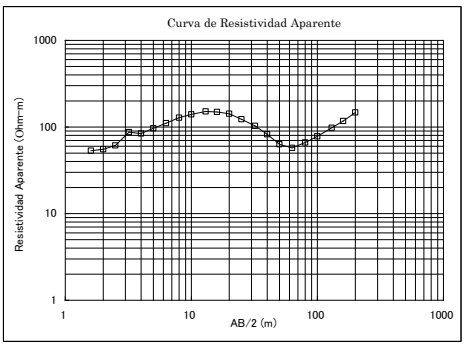
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
91	1.7	Dry top superficial layer	Dry.
1244	2.2	Compact phonolitic rocks	Dry
12	6	Moist loose volcanic soils	Dry
418	50	Slightly weathered trachytes	Shallow aquifer expected
218	120	Highly weathered and fractured tuffs and trachytes	Deep aquifer expected
1000	>120	Compact basalts	Not aquiferous



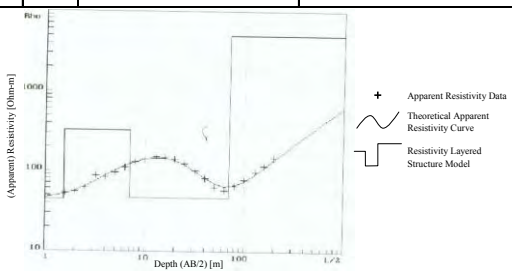
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Salawa
	Location	Kapropita Soi	Site No.	V-114
	Site Name	SICHET PRIMARY	Elevation	1217
36N	UTM-E	803658	UTM-N	45280
	Latitude	0.402889	Longitude	35.727917

AB/2 (m)	Rho-a (Wm)
1.6	53.3
2.0	55.2
2.5	61.2
3.2	87.1
4.0	83.9
5.0	96.4
6.3	110.6
8.0	128.0
10.0	140.0
13.0	151.0
16.0	149.0
20.0	142.0
25.0	123.0
32.0	103.0
40.0	82.4
50.0	63.1
63.0	57.4
80.0	66.1
100.0	77.8
130.0	97.8
160.0	117.1
200.0	147.0



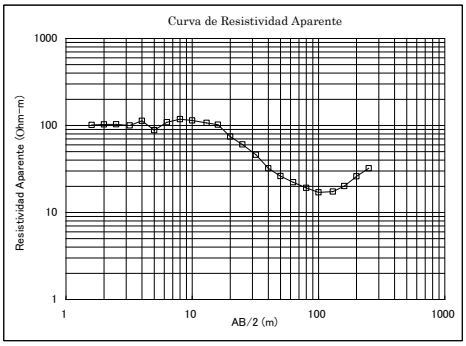
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
45	1.6	Dry top superficial layer	Dry.
326	7	Dry volcanic soils	Dry
46	70	Highly weathered and fractured tuffs and trachytes	Shallow aquifer expected
5000	>70	Compact trachytes	Not aquiferous



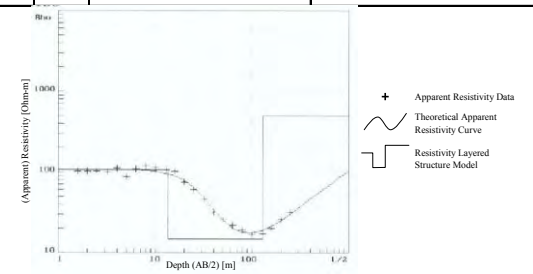
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Salawa
	Location	Kapropita Soi	Site No.	V-115
	Site Name	KIKOK SOSPEI CHURCH	Elevation	
36N	UTM-E	801291	UTM-N	44592
	Latitude	0.402972	Longitude	35.706639

AB/2 (m)	Rho-a (Wm)
1.6	101.3
2.0	102.8
2.5	103.2
3.2	99.9
4.0	112.8
5.0	88.1
6.3	108.8
8.0	118.0
10.0	114.0
13.0	107.0
16.0	102.0
20.0	74.5
25.0	60.5
32.0	46.0
40.0	32.2
50.0	26.2
63.0	22.2
80.0	19.2
100.0	17.0
130.0	17.4
160.0	20.1
200.0	26.1
250.0	32.2



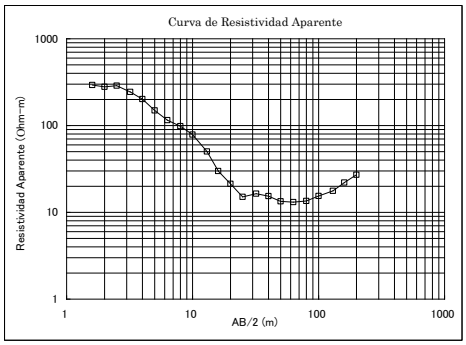
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
107	13	Dry top superficial layer	Dry.
15	129	Highly weathered and fractured tuffs and trachytes	Aquifer expected in this layer
500	>129	Compact trachytes	Not aquiferous



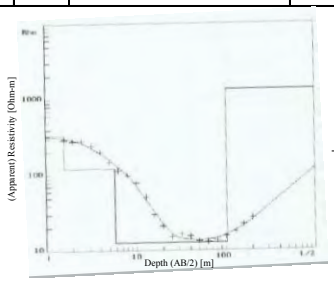
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Sacho
	Location	Kapkelelwa	Site No.	V-116
	Site Name	KATUNDI	Elevation	1252
36N	UTM-E	800135	UTM-N	42077
	Latitude	0.380250	Longitude	35.696278

AB/2 (m)	Rho-a (Wm)
1.6	292.6
2.0	279.7
2.5	287.6
3.2	244.3
4.0	202.0
5.0	149.2
6.3	115.4
8.0	98.4
10.0	78.6
13.0	50.2
16.0	29.9
20.0	21.3
25.0	15.1
32.0	16.4
40.0	15.4
50.0	13.4
63.0	13.1
80.0	13.5
100.0	15.5
130.0	17.7
160.0	22.0
200.0	27.1



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
335	1.6	Dry top superficial layer	Dry.
120	6	Dry volcanic soils	Dry
13	103	Highly weathered and fractured tuffs and trachytes	Aquifer expected in this layer
1327	>103	Compact basalts	Not aquiferous

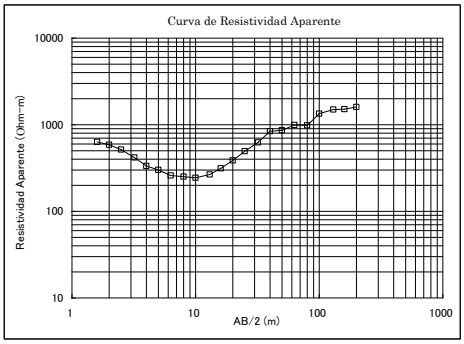


+ Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

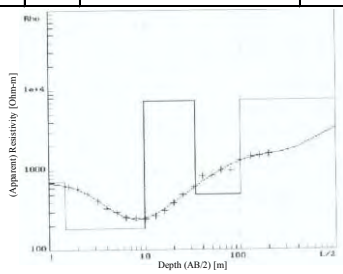
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Sacho
	Location	Kapkelelwa	Site No.	V-117
	Site Name	SAIMET	Elevation	1420
36N	UTM-E	804410	UTM-N	42635
	Latitude	0.385306	Longitude	35.734667

AB/2 (m)	Rho-a (Wm)
1.6	632.4
2.0	587.6
2.5	517.0
3.2	418.3
4.0	334.6
5.0	301.1
6.3	259.2
8.0	251.8
10.0	244.1
13.0	266.6
16.0	313.2
20.0	386.8
25.0	493.9
32.0	624.4
40.0	840.5
50.0	861.3
63.0	992.2
80.0	984.0
100.0	1,343.5
130.0	1,497.0
160.0	1,514.0
200.0	1,601.1



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
714	1.5	Dry top superficial layer	Dry.
184	10	Moist loose volcanic soils	Dry
7352	34	Compact trachytes rocks	Dry
500	100	Slightly weathered trachytes	Shallow aquifer expected
7485	>100	Compact basalts	No aquifer expected

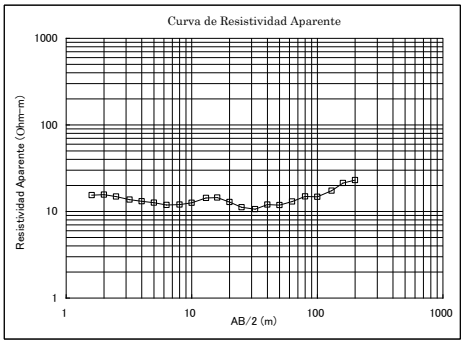


+ Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

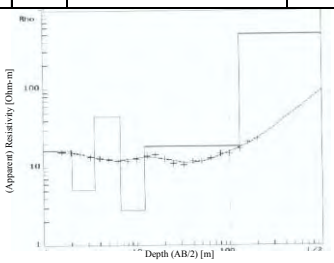
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Sacho
	Location	Chepkero	Site No.	V-119
	Site Name	LELGUT PRIMARY CHEPKERO	Elevation	985
36N	UTM-E	805539	UTM-N	35933
	Latitude	0.324722	Longitude	35.744778

AB/2 (m)	Rho-a (Wm)
1.6	15.5
2.0	15.6
2.5	14.9
3.2	13.7
4.0	13.1
5.0	12.6
6.3	11.9
8.0	12.0
10.0	12.6
13.0	14.3
16.0	14.5
20.0	12.9
25.0	11.2
32.0	10.6
40.0	12.0
50.0	11.9
63.0	13.0
80.0	14.9
100.0	14.8
130.0	17.4
160.0	21.3
200.0	23.0



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
17	2	Dry top superficial layer	Dry.
5	4	Loose volcanic soils	Dry
44	7	Slightly weathered tuffs	Moist
3	12	Slightly weathered trachytes	Moist. No aquifers.
19	130	Highly weathered and fractured tuffs and trachytes	Aquifer expected
500	>130	porphyritic olivine basalts	Not aquiferous

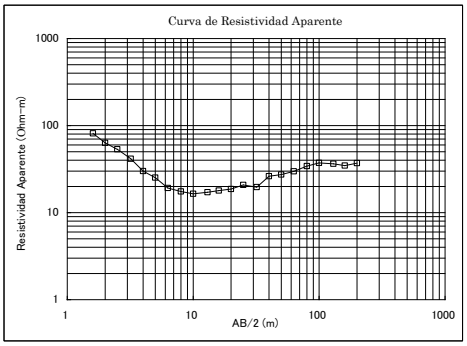


+ Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

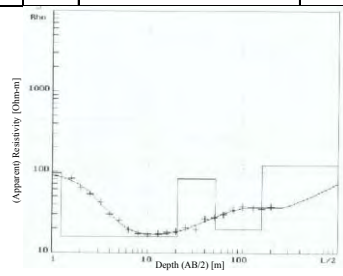
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Tenges
	Location	Kisonei	Site No.	V-120
	Site Name	MOGORRWA	Elevation	982
36N	UTM-E	804499	UTM-N	33220
	Latitude	0.300222	Longitude	35.735194

AB/2 (m)	Rho-a (Wm)
1.6	81.3
2.0	63.4
2.5	53.4
3.2	41.6
4.0	30.0
5.0	25.2
6.3	19.2
8.0	17.5
10.0	16.5
13.0	17.2
16.0	17.9
20.0	18.7
25.0	20.8
32.0	19.6
40.0	26.2
50.0	27.4
63.0	29.8
80.0	34.3
100.0	37.3
130.0	36.4
160.0	34.7
200.0	37.0



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
96	1.3	Dry top superficial layer	Dry.
16	20	Loose volcanic soils	Dry
82	52	Slightly weathered tuffs	Moist
20	160	Highly weathered and fractured tuffs and trachytes	Aquifer expected.
121	>160	Slightly weathered porphyritic olivine basalts	Deep aquifer expected

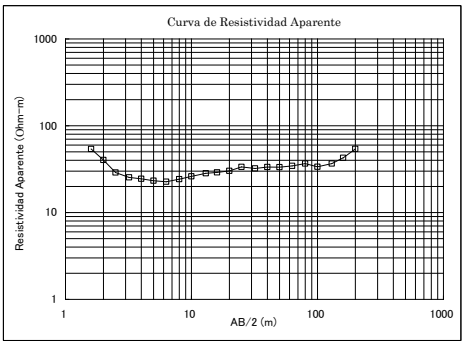


+ Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

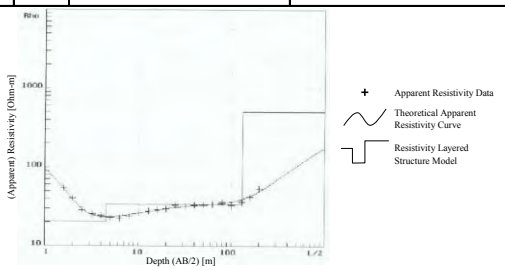
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Tenges
	Location	Kisonei	Site No.	V-121
	Site Name	KISONEI PRIMARY	Elevation	1597
36N	UTM-E	802659	UTM-N	28270
	Latitude	0.255472	Longitude	35.718972

AB/2 (m)	Rho-a (Wm)
1.6	54.0
2.0	40.4
2.5	28.9
3.2	25.4
4.0	24.5
5.0	23.3
6.3	22.7
8.0	24.2
10.0	26.1
13.0	28.3
16.0	29.0
20.0	30.2
25.0	33.5
32.0	32.2
40.0	33.4
50.0	33.3
63.0	34.4
80.0	36.7
100.0	33.7
130.0	36.7
160.0	42.6
200.0	54.1



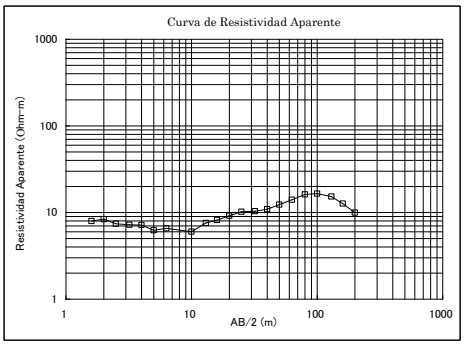
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
154	0.6	Dry top superficial layer	Dry.
21	5	Loose volcanic soils	Dry
34	132	Highly weathered and fractured tuffs and trachytes	Aquifer expected
509	>132	porphyritic olivine basalts	No aquifers.



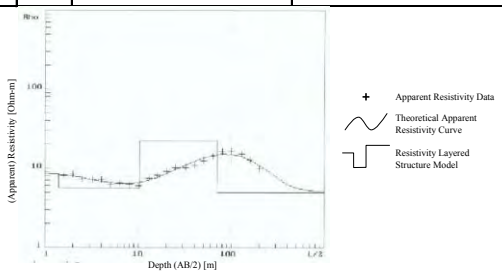
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Tenges
	Location	Ochii	Site No.	V-122
	Site Name	OCHII PRIMARY	Elevation	1657
36N	UTM-E	808651	UTM-N	33305
	Latitude	0.300944	Longitude	35.772694

AB/2 (m)	Rho-a (Wm)
1.6	8.0
2.0	8.4
2.5	7.4
3.2	7.2
4.0	7.2
5.0	6.3
6.3	6.6
10.0	6.0
13.0	7.6
16.0	8.2
20.0	9.2
25.0	10.2
32.0	10.3
40.0	10.9
50.0	12.4
63.0	14.1
80.0	16.2
100.0	16.5
130.0	15.3
160.0	12.7
200.0	10.0



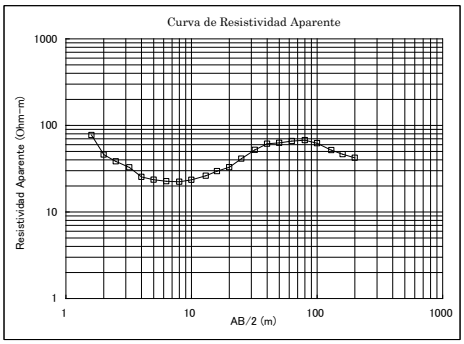
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
9	1.4	Dry top superficial layer	Dry.
6	10.3	Loose volcanic soils	Dry
22	70	Slightly weathered tuffs	Shallow aquifer may be present
5	>70	Highly weathered and fractured tuffs and trachytes	Aquifer expected.



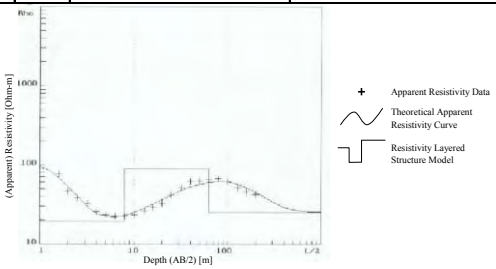
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Tenges
	Location	Tenges	Site No.	V-123
	Site Name	SIGINWO	Elevation	1943
36N	UTM-E	813555	UTM-N	34611
	Latitude	0.312778	Longitude	35.816750

AB/2 (m)	Rho-a (Wm)
1.6	77.3
2.0	46.0
2.5	38.5
3.2	32.8
4.0	25.4
5.0	23.6
6.3	22.6
8.0	22.3
10.0	23.5
13.0	26.2
16.0	29.6
20.0	32.9
25.0	41.2
32.0	52.2
40.0	61.3
50.0	62.9
63.0	65.9
80.0	67.4
100.0	62.2
130.0	51.7
160.0	46.5
200.0	42.3



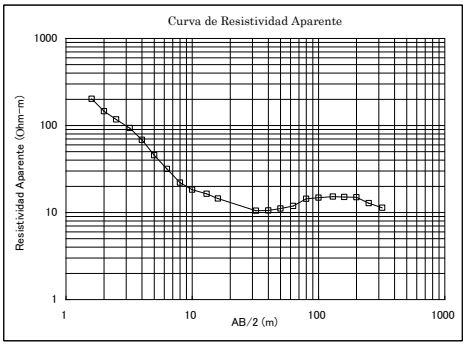
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
118	0.8	Dry top superficial layer	Dry.
19	8	Loose volcanic soils	Dry
89	63	Slightly weathered tuffs	Shallow aquifer may be present
25	>63	Highly weathered and fractured tuffs and trachytes	Aquifer expected.



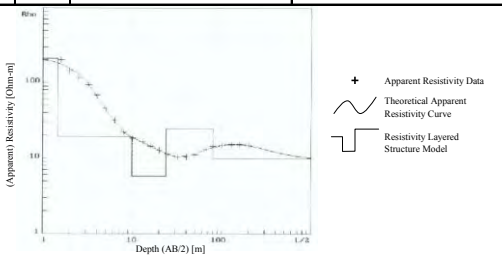
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Tenges
	Location	Tenges	Site No.	V-124
	Site Name	TABARIN	Elevation	1849
36N	UTM-E	813133	UTM-N	37460
	Latitude	0.324778	Longitude	35.802250

AB/2 (m)	Rho-a (Wm)
1.6	202.8
2.0	145.8
2.5	117.4
3.2	93.6
4.0	68.4
5.0	45.5
6.3	31.7
8.0	22.0
10.0	18.3
13.0	16.4
16.0	14.5
32.0	10.5
40.0	10.5
50.0	11.1
63.0	11.9
80.0	14.4
100.0	14.8
130.0	15.2
160.0	15.1
200.0	15.0
250.0	12.8
320.0	11.2



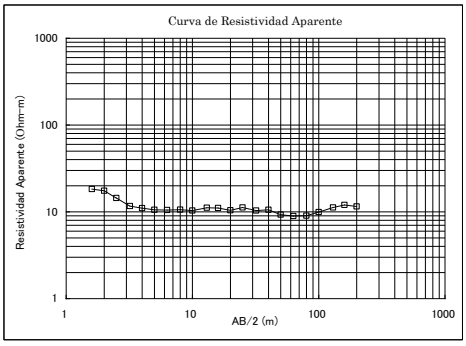
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
20	1.2	Dry top superficial layer	Dry.
15	24	Loose volcanic soils	Dry
447	>24	Highly weathered and fractured tuffs and trachytes	Shallow aquifer may be present



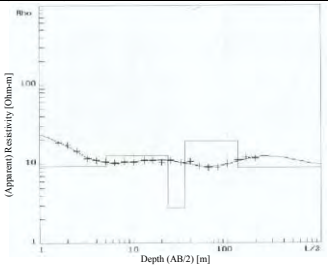
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Tenges
	Location	Tuluongoi	Site No.	V-125
	Site Name	TULUONGOI- SANGARAU PRIMARY	Elevation	1702
36N	UTM-E	809176	UTM-N	30779
	Latitude	0.278139	Longitude	35.777444

AB/2 (m)	Rho-a (Wm)
1.6	18.3
2.0	17.5
2.5	14.4
3.2	11.7
4.0	11.1
5.0	10.6
6.3	10.5
8.0	10.6
10.0	10.3
13.0	11.1
16.0	11.1
20.0	10.4
25.0	11.2
32.0	10.5
40.0	10.6
50.0	9.3
63.0	8.9
80.0	9.0
100.0	9.9
130.0	11.2
160.0	12.0
200.0	11.5



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
27	0.8	Dry top superficial layer	Dry.
9.3	5	Loose volcanic soils	Dry
13	23	Compact volcanic soils	Moist
3	35	Slightly weathered tuffs	Very low water content
19	130	Slightly weathered trachytes	Aquifer expected.
9	>130	Highly weathered and fractured trachytes	Deep aquifer expected

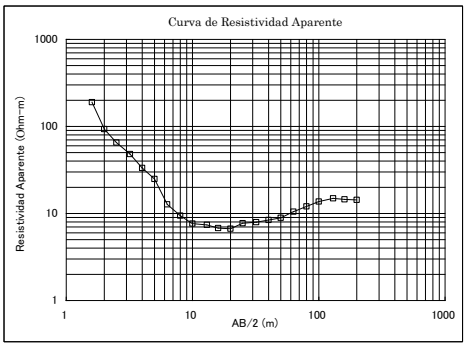


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

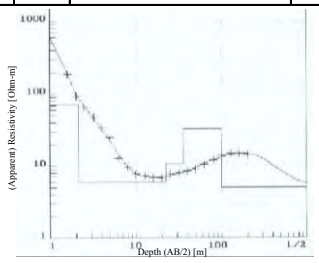
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Tenges
	Location	Tuluongoi	Site No.	V-126
	Site Name	TEBEI	Elevation	1548
36N	UTM-E	815810	UTM-N	30388
	Latitude	0.274611	Longitude	35.837000

AB/2 (m)	Rho-a (Wm)
1.6	189.9
2.0	93.2
2.5	65.3
3.2	48.1
4.0	33.3
5.0	24.9
6.3	12.7
8.0	9.4
10.0	7.6
13.0	7.4
16.0	6.8
20.0	6.7
25.0	7.7
32.0	7.9
40.0	8.4
50.0	8.9
63.0	10.5
80.0	12.0
100.0	13.7
130.0	14.9
160.0	14.5
200.0	14.3



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
1873	0.4	Dry top superficial layer	Dry.
71	2	Compact volcanic soils	Dry
6	22	Loose volcanic soils	Moist
33	36	Slightly weathered tuffs	Very low water content
5	100	Highly weathered tuffs and trachytes	Aquifer expected.
9	>130	Highly weathered trachytes	Deep aquifer expected

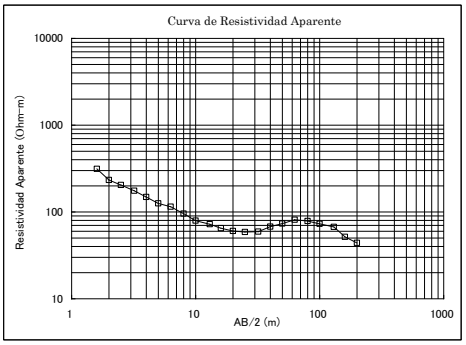


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

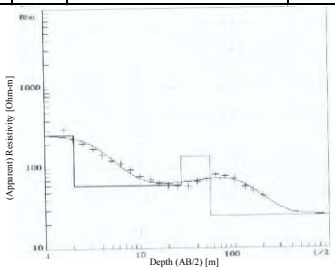
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Tenges
	Location	Bekibon	Site No.	V-129
	Site Name	TINOMOI	Elevation	1793
36N	UTM-E	815707	UTM-N	36036
	Latitude	0.325639	Longitude	35.836056

AB/2 (m)	Rho-a (Wm)
1.6	313.6
2.0	233.7
2.5	204.7
3.2	175.3
4.0	148.9
5.0	125.4
6.3	114.9
8.0	95.7
10.0	79.3
13.0	72.1
16.0	64.9
20.0	60.4
25.0	58.7
32.0	59.3
40.0	67.8
50.0	73.4
63.0	81.2
80.0	78.7
100.0	72.9
130.0	67.2
160.0	51.5
200.0	44.1



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
265	2	Dry top superficial layer	Dry.
61	27	Loose volcanic soils	Dry
140	55	Slightly weathered tuffs and trachytes	May have a shallow aquifer
25	>55	Highly weathered and fractured tuffs and trachytes	Aquiferous

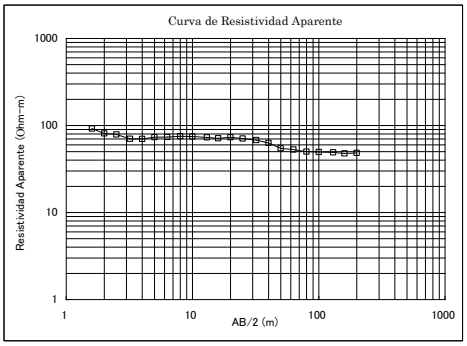


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

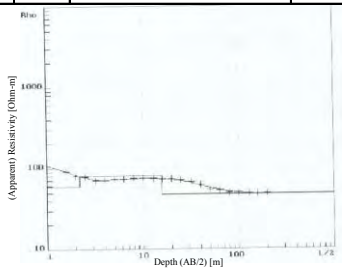
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Sacho
	Location	Kabasis	Site No.	V-130
	Site Name	TOMBOIYWO	Elevation	2159
36N	UTM-E	811394	UTM-N	46771
	Latitude	0.422639	Longitude	35.797361

AB/2 (m)	Rho-a (Wm)
1.6	92.1
2.0	81.0
2.5	78.9
3.2	70.3
4.0	69.9
5.0	73.3
6.3	73.7
8.0	75.1
10.0	74.7
13.0	73.0
16.0	71.2
20.0	73.3
25.0	70.8
32.0	67.9
40.0	63.2
50.0	54.6
63.0	52.8
80.0	50.1
100.0	49.6
130.0	49.0
160.0	47.7
200.0	48.4



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
126	0.7	Dry top superficial layer	Dry.
59	2.2	Loose volcanic soils	Dry
80	16	Slightly weathered tuffs	Shallow aquifer may be present
47	>16	Highly weathered and fractured tuffs and trachytes	Aquifer expected.

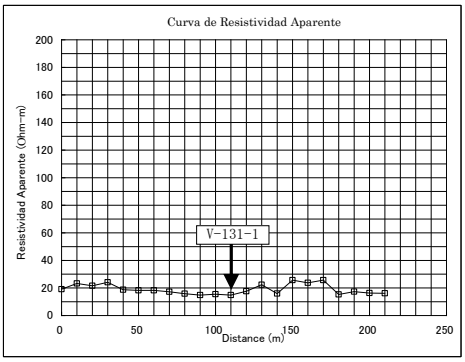


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

Horizontal Electric Profiling Datasheet (Wenner)

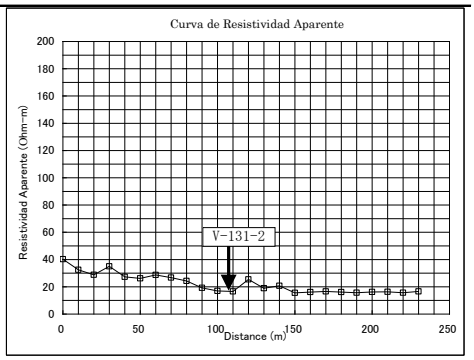
	District	Baringo	Division	Sacho
	Location	Kabasis	Site No.	HEP-131-1
	Site Name	KABASIS	Elevation	1453
Start Point	Latitude	0.427694	Longitude	35.793056
End Point	Latitude	0.428083	Longitude	35.791611

Distance (m)	Rho-a (Wm)
0	19.11
10	23.26
20	21.6
30	24.14
40	18.73
50	18.23
60	18.23
70	17.2
80	15.84
90	14.83
100	15.46
110	14.83
120	17.6
130	22.38
140	15.99
150	25.65
160	23.76
170	25.65
180	15.34
190	17.35
200	16.34
210	16.1



	Location	Kinyach	Site No.	HEP-131-2
	Site Name	KABASIS	Elevation	1453
Start Point	Latitude	0.433750	Longitude	35.787778
End Point	Latitude	0.433667	Longitude	35.788611

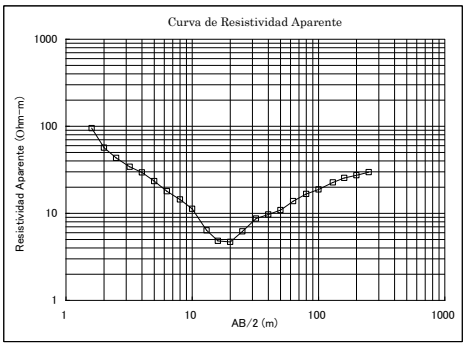
Distance (m)	Rho-a (Wm)
0	40.22
10	32.43
20	28.79
30	35
40	27.28
50	26.15
60	28.66
70	26.78
80	24.26
90	19.23
100	16.97
110	16.59
120	25.39
130	18.98
140	20.74
150	15.59
160	16.09
170	16.59
180	16.09
190	15.71
200	16.21
210	16.34
220	15.71
230	16.59



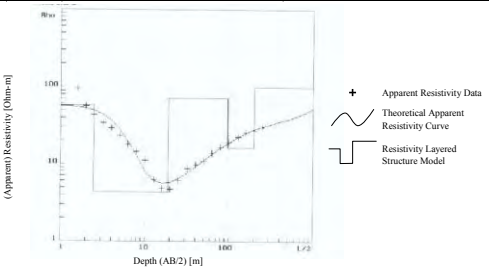
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Sacho
	Location	Kabasis	Site No.	V-131-1
	Site Name	KABASIS	Elevation	2064
36N	UTM-E	810835	UTM-N	47330
	Latitude	0.427694	Longitude	35.792361

AB/2 (m)	Rho-a (Wm)
1.6	95.1
2.0	56.76
2.5	43.24
3.2	34.25
4.0	29.45
5.0	23.4
6.3	17.9
8.0	14.4
10.0	11.27
13.0	6.36
16.0	4.82
20.0	4.7
25.0	6.2
32.0	8.7
40.0	9.7
50.0	10.9
63.0	13.8
80.0	16.7
100.0	18.8
130.0	22.63
160.0	25.5
200.0	27.42
250.0	29.7



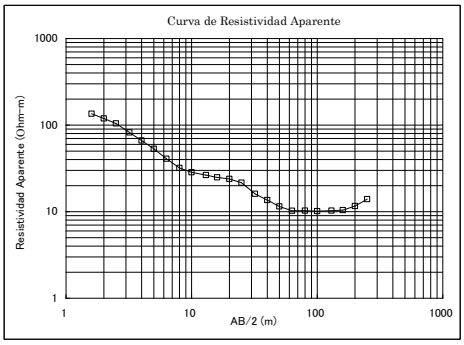
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
57	0 -2.5	Dry top superficial layer and fractured trachytes.	Dry. No aquifers
4.3	2.5 -19	Highly weathered and fractured trachyphonolites	No aquifers
72	19 - 96	Slightly weathered basalts/ trachytes.	Shallow aquifer expected in this zone
16	96 - 200	Highly weathered and fractured trachyphonolites and basalts rocks.	Aquiferous layer
50	>200	Fractured and weathered basalts, old surface layer.	Aquiferous. Deep aquifers expected.



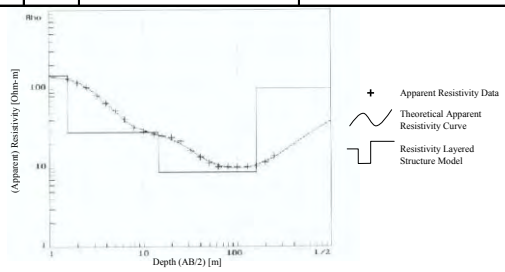
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Sacho
	Location	Kabasis	Site No.	V-131-2
	Site Name	KABASIS	Elevation	2093
36N	UTM-E	810414	UTM-N	47993
	Latitude	0.433694	Longitude	35.788583

AB/2 (m)	Rho-a (Wm)
1.6	135.25
2.0	119.18
2.5	104.53
3.2	82.27
4.0	66.43
5.0	53.22
6.3	40.8
8.0	32
10.0	28.48
13.0	26.5
16.0	24.9
20.0	23.9
25.0	21.56
32.0	16.1
40.0	13.6
50.0	11.5
63.0	10.25
80.0	10.28
100.0	10.13
130.0	10.28
160.0	10.43
200.0	11.62
250.0	13.92



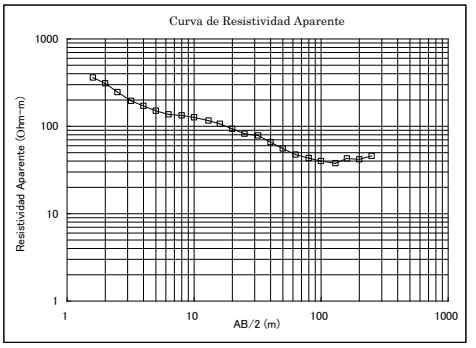
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
149	0 -1	Thin dry top superficial layer	Dry. No aquifers
28	15-1	Weathered and fractured trachyphonolites/ basalts	Moist. Very thin aquifer layer. Not potential for exploitation.
9	15-161	Highly weathered/fractured trachyphonolites/ basalts/ clays	Aquiferous layer – Low potential
100	>161	Highly weathered/fractured trachytic	Aquiferous. Deep aquifers expected.
3676	>125	Fresh compact trachytes	No aquifers expected



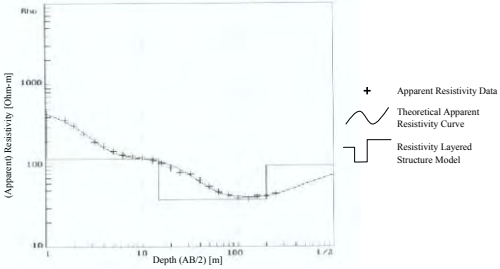
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Sacho
	Location	Kabasis	Site No.	V-131-3
	Site Name	KABASIS	Elevation	2123
36N	UTM-E	810205	UTM-N	48672
	Latitude	0.439861	Longitude	35.786694

AB/2 (m)	Rho-a (Wm)
1.6	361.55
2.0	310.34
2.5	245.9
3.2	195.6
4.0	171.27
5.0	150.3
6.3	136.78
8.0	133.2
10.0	126.45
13.0	116.07
16.0	106.8
20.0	93.4
25.0	82.32
32.0	78.32
40.0	66.03
50.0	55.57
63.0	47.45
80.0	43.35
100.0	39.98
130.0	37.8
160.0	42.82
200.0	41.82
250.0	45.88



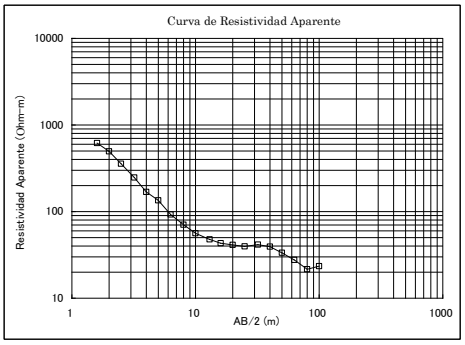
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
472	0 - 1	Dry top superficial layer	Dry. No aquifers
123	15-1	Slightly weathered/fractured trachytic phonolites	Moist. Not potential for exploitation.
38	15-200	Weathered and fractured trachyphonolites / basalts	Aquiferous
100	>200	Weathered trachy-phonolite/basalts	No aquifers



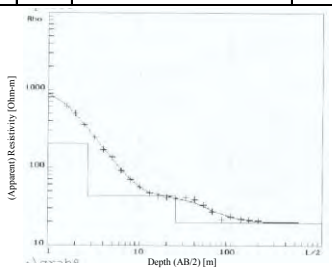
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Kabarnet
	Location	Orokwo	Site No.	V-133
	Site Name	KAPCHOMUSWO	Elevation	1999
36N	UTM-E	805378	UTM-N	59489
	Latitude	0.537611	Longitude	35.743444

AB/2 (m)	Rho-a (Wm)
1.6	617.0
2.0	495.6
2.5	357.2
3.2	247.2
4.0	168.8
5.0	135.0
6.3	92.5
8.0	70.6
10.0	56.2
13.0	47.8
16.0	43.2
20.0	41.3
25.0	39.6
32.0	41.6
40.0	39.3
50.0	33.4
63.0	27.7
80.0	21.6
100.0	23.4



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
1092	0.8	Exposed trachytic outcrops	Dry.
201	3	Compact volcanic soils	Dry
43	25	Slightly weathered tuffs	Shallow aquifer may be present
20	>25	Highly weathered and fractured tuffs and trachytes	Aquifer expected.

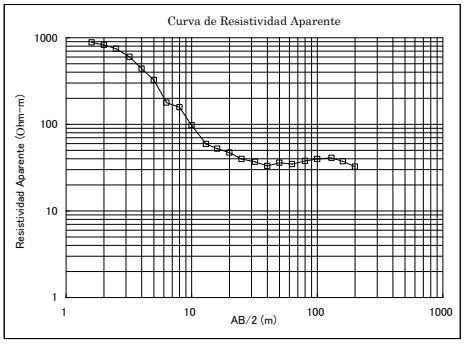


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

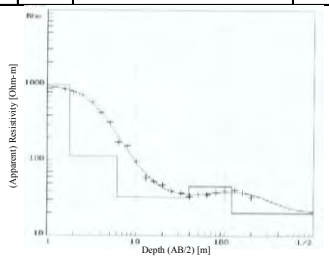
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Kabarnet
	Location	Orokwo	Site No.	V-134
	Site Name	KIWANJA NDEGE KABARNET	Elevation	1882
36N	UTM-E	803592	UTM-N	59000
	Latitude	0.533222	Longitude	35.727389

AB/2 (m)	Rho-a (Wm)
1.6	881.4
2.0	827.2
2.5	748.0
3.2	602.0
4.0	439.0
5.0	324.0
6.3	178.0
8.0	157.6
10.0	97.7
13.0	59.4
16.0	52.4
20.0	47.1
25.0	39.8
32.0	36.9
40.0	33.1
50.0	36.0
63.0	34.7
80.0	37.8
100.0	39.8
130.0	41.0
160.0	37.4
200.0	32.4



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
990	1.8	Dry top superficial layer	Dry.
114	6	Compact volcanic soils	Dry
33	39	Loose volcanic soils	Moist
46	120	Slightly weathered tuffs and trachytes	Very low water content
20	>120	Highly weathered and fractured trachytes	Aquifer expected.

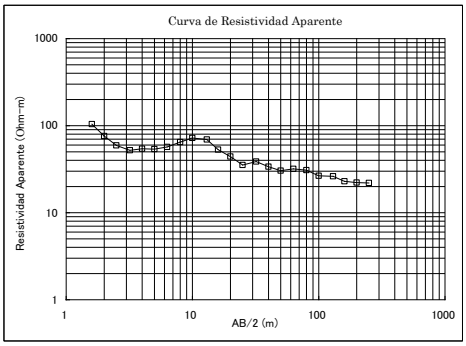


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

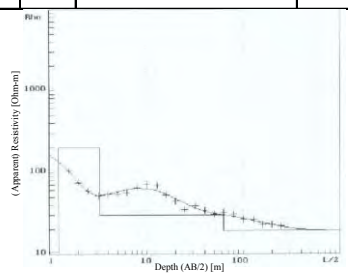
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Kabarnet
	Location	Orokwo	Site No.	V-135
	Site Name	PEMWAI CENTRE	Elevation	2231
36N	UTM-E	808480	UTM-N	63186
	Latitude	0.571000	Longitude	35.771278

AB/2 (m)	Rho-a (Wm)
1.6	104.1
2.0	76.0
2.5	59.2
3.2	52.2
4.0	54.3
5.0	53.7
6.3	56.9
8.0	64.8
10.0	72.3
13.0	69.4
16.0	53.0
20.0	44.1
25.0	35.3
32.0	38.6
40.0	33.8
50.0	30.5
63.0	31.9
80.0	30.9
100.0	26.5
130.0	26.2
160.0	23.0
200.0	22.2
250.0	21.9



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
228	0.7	Dry top superficial deposits	Dry. No aquifers
11	1.3	Loose volcanic soils	Moist. No aquifers are expected
201	3	Dry Volcanic ashes and sediments	Dry. No aquifers are expected
30	63	Slightly weathered volcanic ashes	Shallow aquifer layer expected in this layer.
19	>105	Highly weathered trachytic phonolites.	Aquiferous.

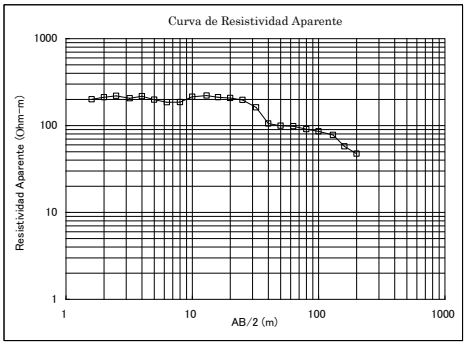


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

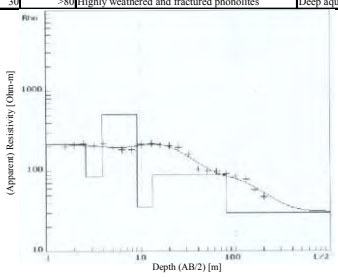
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Kabarnet
	Location	Ewalel	Site No.	V-136
	Site Name	TULEI PRIMARY SCHOOL	Elevation	2240
36N	UTM-E	813093	UTM-N	64689
	Latitude	0.584556	Longitude	35.812694

AB/2 (m)	Rho-a (Wm)
1.6	200.4
2.0	211.2
2.5	220.0
3.2	205.7
4.0	217.8
5.0	198.4
6.3	185.1
8.0	185.8
10.0	214.7
13.0	221.0
16.0	212.0
20.0	207.6
25.0	197.2
32.0	162.0
40.0	105.3
50.0	99.6
63.0	98.3
80.0	90.9
100.0	85.6
130.0	77.3
160.0	57.5
200.0	47.4



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
217	3	Dry top superficial deposits	Dry. No aquifers
86	4	Loose volcanic soils	Moist. No aquifers are expected
512	9	Dry Volcanic ashes and sediments	Dry. No aquifers are expected
36	13	Slightly weathered volcanic ashes	Moist
91	80	Highly weathered trachytes and trachy phonolites.	Shallow aquiferous
30	>80	Highly weathered and fractured phonolites	Deep aquifer expected

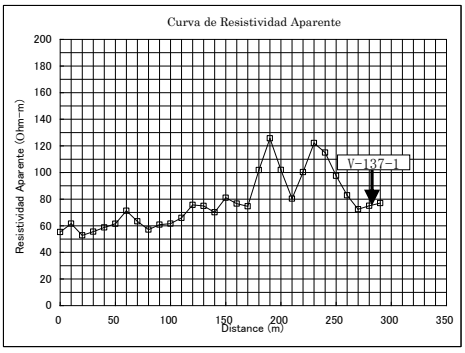


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

Horizontal Electric Profiling Datasheet (Wenner)

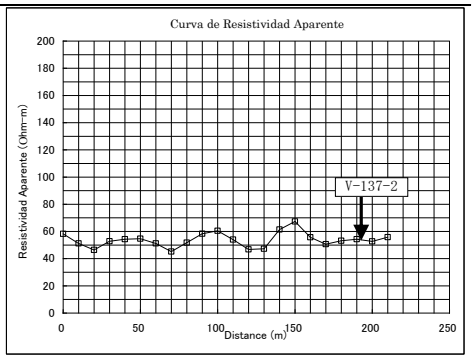
	District	Baringo	Division	Kabarnet
	Location	Ewalel	Site No.	HEP-137-1
	Site Name	KAPKAWA	Elevation	2124
Start Point	Latitude	0.568444	Longitude	35.778722
End Point	Latitude	0.567667	Longitude	35.781750

Distance (m)	Rho-a (Wm)
0	55.3
10	61.58
20	52.79
30	55.55
40	58.7
50	61.45
60	71.26
70	63.34
80	57.06
90	60.86
100	61.58
110	65.9
120	75.7
130	74.9
140	70.13
150	81.06
160	76.66
170	74.65
180	101.8
190	125.7
200	101.9
210	80.4
220	100.3
230	122.16
240	114.99
250	97.5
260	82.9
270	72.46
280	75.04
290	76.98



	Location	Ewalel	Site No.	HEP-137-2
	Site Name	KAPKAWA	Elevation	2099
Start Point	Latitude	0.563444	Longitude	35.778472
End Point	Latitude	0.565306	Longitude	35.779750

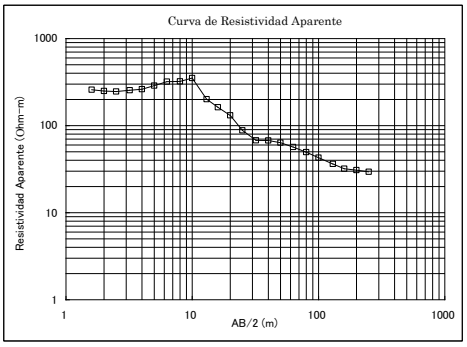
Distance (m)	Rho-a (Wm)
0	58.19
10	51.15
20	46.37
30	52.79
40	54.29
50	54.67
60	51.15
70	45.24
80	51.78
90	58.31
100	60.5
110	54.04
120	46.75
130	47.25
140	61.45
150	67.36
160	55.67
170	50.64
180	53.16
190	54.29
200	52.65
210	55.8



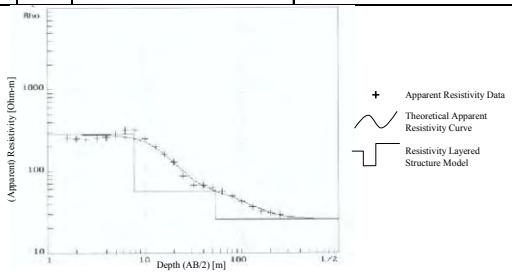
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Kabarnet
	Location	Ewalel	Site No.	V-137-1
	Site Name	KAPKAWA	Elevation	2237
36N	UTM-E	809609	UTM-N	62840
	Latitude	0.567861	Longitude	35.781417

AB/2 (m)	Rho-a (Wm)
1.6	258.46
2.0	250.16
2.5	246.28
3.2	254.65
4.0	261.86
5.0	287.86
6.3	319.92
8.0	322
10.0	352.28
13.0	200.92
16.0	162.2
20.0	131.04
25.0	88.2
32.0	67.62
40.0	67.4
50.0	63.68
63.0	56.72
80.0	49.58
100.0	42.89
130.0	36.29
160.0	32.04
200.0	30.78
250.0	29.48



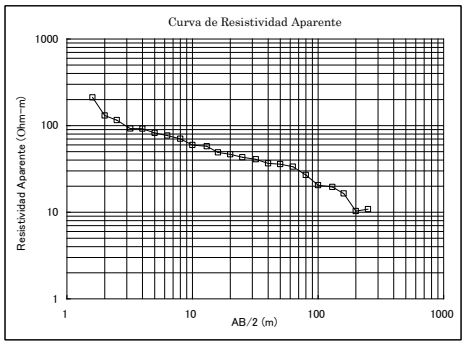
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
284	0 -7.7	Dry top superficial layer and fractured trachytes.	Dry. No aquifers
57	7.7-54	Slightly weathered and fractured trachyphonolites	No aquifers
26	>54	Highly weathered/fractured trachyphonolites &	Aquiferous layer



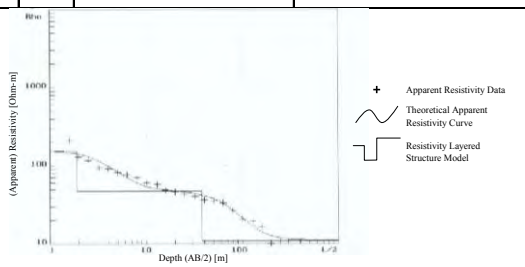
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Kabarnet
	Location	Ewalel	Site No.	V-137-2
	Site Name	KAPKAWA	Elevation	2091
36N	UTM-E	809345	UTM-N	62472
	Latitude	0.564528	Longitude	35.779056

AB/2 (m)	Rho-a (Wm)
1.6	211.27
2.0	130.9
2.5	115.8
3.2	92.63
4.0	92.07
5.0	82.47
6.3	76.76
8.0	70.6
10.0	59.78
13.0	57.77
16.0	48.98
20.0	46.62
25.0	43.12
32.0	40.8
40.0	36.7
50.0	35.97
63.0	33.5
80.0	26.92
100.0	20.5
130.0	19.54
160.0	16.49
200.0	10.32
250.0	10.84



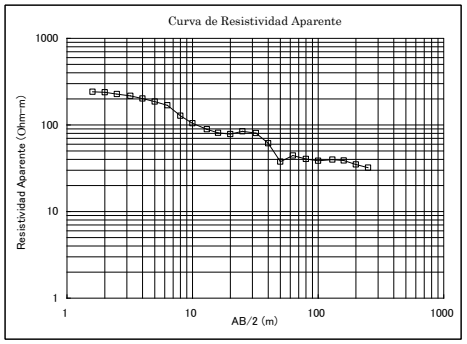
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
156	0 -1.9	Thin dry top superficial layer	Dry. No aquifers
48	1.9-38	Slightly weathered and fractured trachyphonolites	Moist.
11	>38	Highly weathered/fractured trachyphonolites	Aquiferous layer/ Clayey



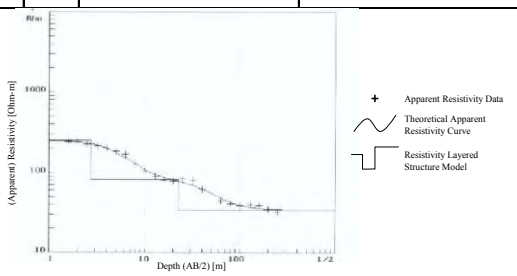
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Kabarnet
	Location	Ewalel	Site No.	V-137-3
	Site Name	KAPKAWA	Elevation	2094
36N	UTM-E	810343	UTM-N	61279
	Latitude	0.553750	Longitude	35.788000

AB/2 (m)	Rho-a (Wm)
1.6	241.76
2.0	238.36
2.5	227.48
3.2	216.66
4.0	201.96
5.0	185.94
6.3	168.52
8.0	127.8
10.0	104.54
13.0	89.04
16.0	81.1
20.0	78.28
25.0	84.28
32.0	80.5
40.0	61.33
50.0	37.65
63.0	44.24
80.0	40.4
100.0	38.53
130.0	39.69
160.0	38.76
200.0	34.96
250.0	32.12



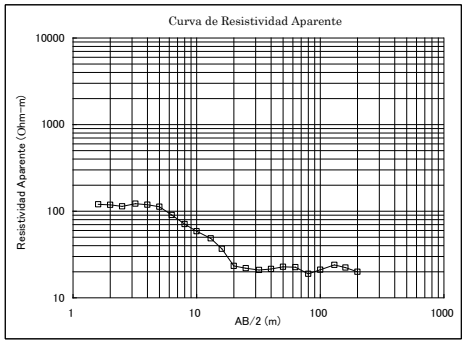
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
250	0 - 2.7	Dry top superficial layer and fractured trachytes.	Dry. No aquifers
82	2.7 -23	Slightly weathered and fractured trachyphonolites	Moist. No aquifers
34	>23	Weathered & ractured trachyphonolites	Aquiferous



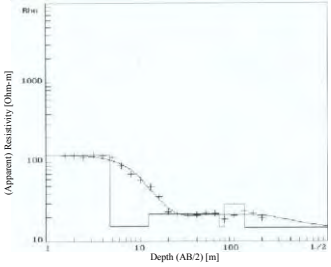
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Kabarnet
	Location	Riwo	Site No.	V-139
	Site Name	SEREI	Elevation	1909
36N	UTM-E	808588	UTM-N	60270
	Latitude	0.544639	Longitude	35.772250

AB/2 (m)	Rho-a (Wm)
1.6	120.2
2.0	118.4
2.5	113.9
3.2	122.2
4.0	118.8
5.0	112.0
6.3	90.4
8.0	71.0
10.0	58.8
13.0	48.5
16.0	36.8
20.0	23.3
25.0	22.0
32.0	20.9
40.0	21.5
50.0	22.8
63.0	22.6
80.0	18.9
100.0	21.1
130.0	24.0
160.0	22.4
200.0	20.0



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
122	5	Dry top superficial deposits	Dry. No aquifers
16	12	Loose volcanic soils	Moist. No aquifers are expected
22	69	Dry Volcanic ashes and sediments	Dry. No aquifers are expected
15	79	Slightly weathered volcanic ashes	Moist
29	128	Highly weathered and trachytic phonolites.	Shallow aquiferous
15	>128	Highly weathered and fractured phonolites	Deep aquifer expected

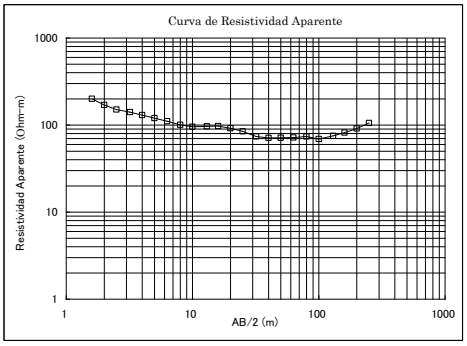


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

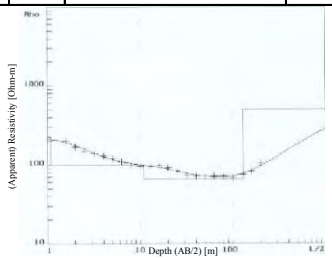
Vertical Electric Sounding Datasheet (Schlumberger)

	District	Baringo	Division	Kabarnet
	Location	Kituro	Site No.	V-140
	Site Name	TURUPKIR	Elevation	1714
36N	UTM-E	814118	UTM-N	55558
	Latitude	0.502028	Longitude	35.821833

AB/2 (m)	Rho-a (Wm)
1.6	200.4
2.0	170.3
2.5	150.9
3.2	140.8
4.0	130.4
5.0	120.2
6.3	110.7
8.0	100.7
10.0	95.8
13.0	96.6
16.0	97.4
20.0	91.8
25.0	84.6
32.0	74.1
40.0	71.4
50.0	71.4
63.0	72.0
80.0	73.9
100.0	69.1
130.0	75.1
160.0	81.8
200.0	91.1
250.0	105.5



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
224	1	Dry top superficial deposits	Dry. No aquifers
101	11	Dry Volcanic ashes	Moist. No aquifers are expected
66	130	Slightly weathered trachytes and trachy phonolites.	Shallow aquifers are expected in this zone
500	>130	Compact phonolites	Low amounts expected in this zone

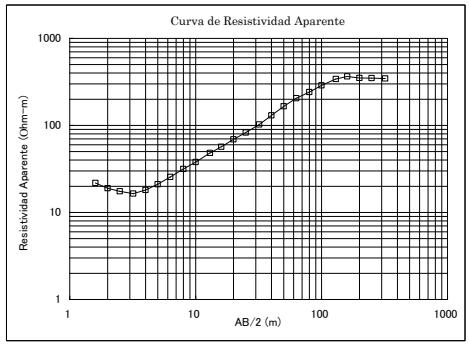


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

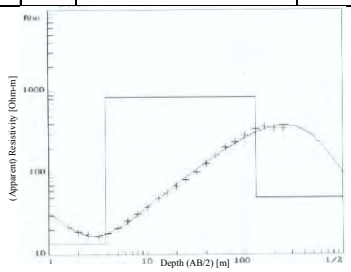
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Tangulbei
	Location	Orus	Site No.	V-141
	Site Name	LALWASOYEN	Elevation	982
37N	UTM-E	188755	UTM-N	112900
	Latitude	1.020222	Longitude	36.203583

AB/2 (m)	Rho-a (Wm)
1.6	21.8
2.0	19.0
2.5	17.5
3.2	16.5
4.0	18.1
5.0	21.1
6.3	25.5
8.0	31.6
10.0	38.0
13.0	48.2
16.0	56.7
20.0	69.1
25.0	82.7
32.0	102.4
40.0	130.1
50.0	165.9
63.0	205.6
80.0	241.6
100.0	288.4
130.0	341.2
160.0	365.0
200.0	351.2
250.0	349.0
320.0	345.9



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
53	0.5	Dry top superficial layer	Dry.
14	4	Loose volcanic soils	Dry
838	130	Compact basalts	Dry.
50	>130	Highly weathered and fractured basalts	Aquifer expected.

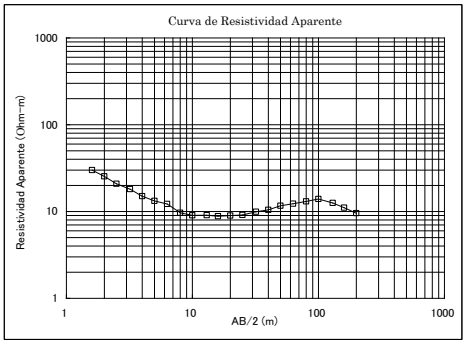


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

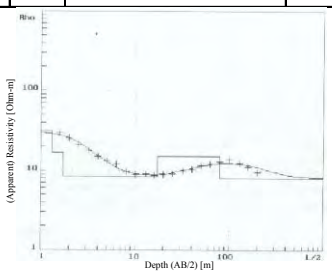
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Tangulbei
	Location	Tangulbei	Site No.	V-143
	Site Name	KILIWOK (CHEPONYORIO)	Elevation	1021
37N	UTM-E	175391	UTM-N	79258
	Latitude	0.716139	Longitude	36.083917

AB/2 (m)	Rho-a (Wm)
1.6	30.1
2.0	25.4
2.5	20.9
3.2	18.1
4.0	15.0
5.0	13.3
6.3	12.2
8.0	9.7
10.0	9.0
13.0	9.1
16.0	8.8
20.0	9.0
25.0	9.1
32.0	9.9
40.0	10.5
50.0	11.6
63.0	12.3
80.0	13.1
100.0	13.9
130.0	12.6
160.0	11.1
200.0	9.6



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
31	1.3	Dry top superficial layer	Dry.
17	2	Loose volcanic soils	Dry
8.4	17	Clay layer	Moist
15	80	Slightly weathered and fractured trachytes	Shallow aquifer expected.
8	>80	Highly weathered and fractured trachytes	Deep aquifer expected.

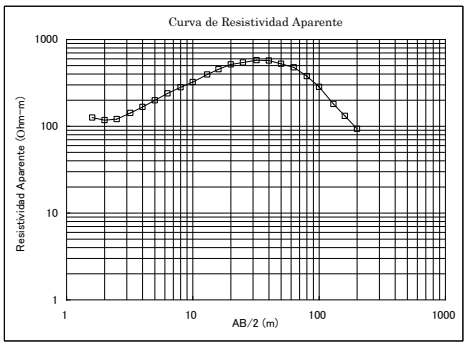


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

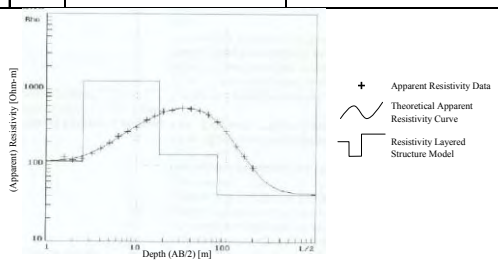
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Tangulbei
	Location	Korosi	Site No.	V-145
	Site Name	NAKOLETE	Elevation	1030
37N	UTM-E	184344	UTM-N	86003
	Latitude	0.777139	Longitude	36.164194

AB/2 (m)	Rho-a (Wm)
1.6	126.0
2.0	117.7
2.5	120.9
3.2	142.4
4.0	166.8
5.0	199.2
6.3	239.3
8.0	281.4
10.0	323.0
13.0	394.7
16.0	453.7
20.0	516.2
25.0	543.9
32.0	576.4
40.0	571.1
50.0	525.4
63.0	477.3
80.0	378.4
100.0	284.0
130.0	180.7
160.0	131.6
200.0	93.4



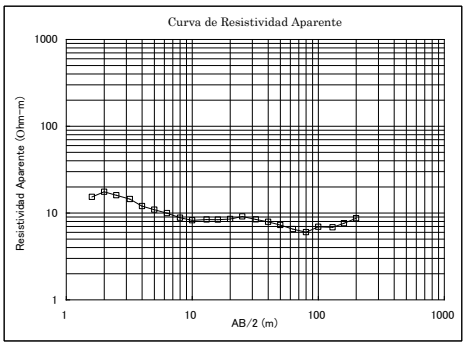
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
111	2.6	Dry top superficial layer	Dry.
1297	18	Compact and fresh basalts	Dry
140	80	Slightly weathered and fractured trachytes	Shallow aquifer expected.
42	>80	Highly weathered and fractured trachytes	Aquifer expected in this layer.



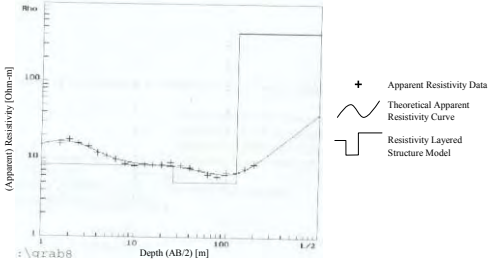
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Tangulbei
	Location	Tangulbei	Site No.	V-146
	Site Name	KALAPATA	Elevation	1197
37N	UTM-E	195566	UTM-N	80994
	Latitude	0.731944	Longitude	36.265000

AB/2 (m)	Rho-a (Wm)
1.6	15.3
2.0	17.5
2.5	16.0
3.2	14.5
4.0	12.0
5.0	10.9
6.3	10.0
8.0	8.8
10.0	8.2
13.0	8.4
16.0	8.4
20.0	8.5
25.0	9.1
32.0	8.5
40.0	7.9
50.0	7.3
63.0	6.5
80.0	6.0
100.0	6.9
130.0	6.8
160.0	7.6
200.0	8.7



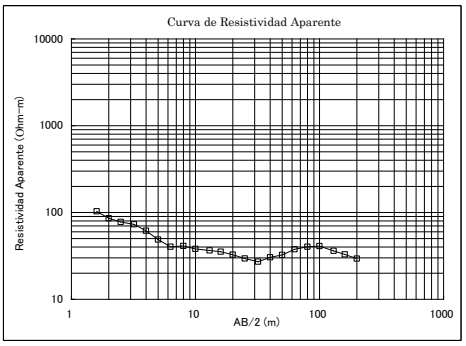
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
4.1	0.2	Dry top superficial layer	Dry.
59	0.5	Loose volcanic soils	Dry
8	27	Slightly weathered and fractured trachytes	Moist
5	130	Highly weathered and fractured trachytes	Aquifer expected.
427	>130	Compact basalts	No aquifers



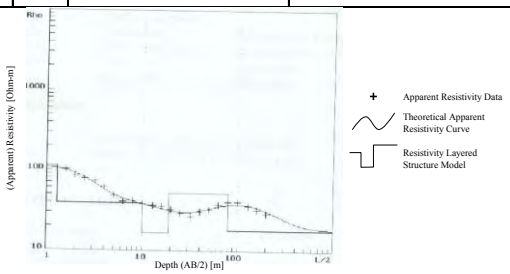
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Tangulbei
	Location	Orus	Site No.	V-148
	Site Name	ORUS	Elevation	1320
37N	UTM-E	200175	UTM-N	105353
	Latitude	0.952056	Longitude	36.306167

AB/2 (m)	Rho-a (Wm)
1.6	103.2
2.0	85.9
2.5	77.8
3.2	73.0
4.0	61.5
5.0	48.8
6.3	40.3
8.0	41.2
10.0	38.1
13.0	36.5
16.0	35.4
20.0	32.7
25.0	29.5
32.0	27.1
40.0	30.4
50.0	32.5
63.0	37.6
80.0	40.3
100.0	41.0
130.0	36.2
160.0	32.9
200.0	29.4



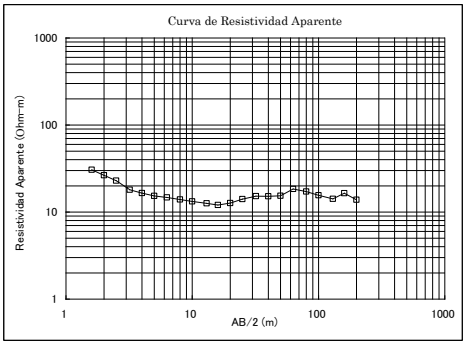
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
115	1.3	Dry top superficial layer	Dry.
39	10	Loose volcanic soils	Dry.
17	19	Slightly weathered tuffs	Moist
52	80	Weathered and fractured trachytes	Aquifer expected.
18	>80	Highly weathered and trachytes	Deep aquifers expected



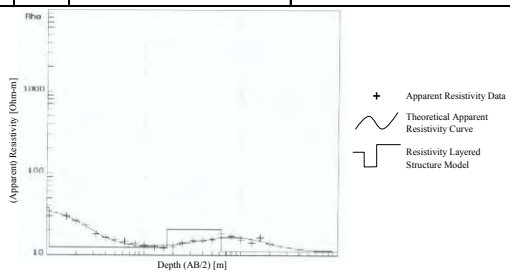
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Tangulbei
	Location	Orus	Site No.	V-149
	Site Name	SIRIA	Elevation	1370
37N	UTM-E	205733	UTM-N	102233
	Latitude	0.923917	Longitude	36.356083

AB/2 (m)	Rho-a (Wm)
1.6	30.6
2.0	26.5
2.5	23.0
3.2	18.0
4.0	16.5
5.0	15.4
6.3	14.7
8.0	13.9
10.0	13.2
13.0	12.6
16.0	12.1
20.0	12.7
25.0	14.1
32.0	15.2
40.0	15.2
50.0	15.4
63.0	18.4
80.0	17.2
100.0	15.6
130.0	14.2
160.0	16.5
200.0	13.9



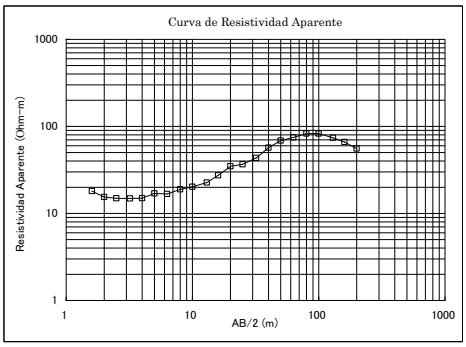
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
37	1	Dry top superficial layer	Dry.
13	17	Loose volcanic soils	Dry
21	63	Slightly weathered and fractured trachytes	Aquifer expected.
11	>80	Highly weathered and fractured trachytes	Deep aquifers expected



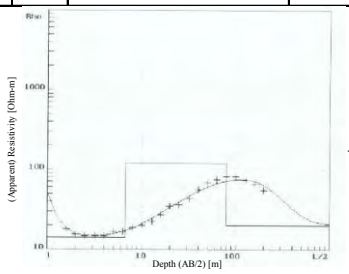
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Tangulbei
	Location	Kokwototo	Site No.	V-150
	Site Name	KAUNGURA	Elevation	1024
37N	UTM-E	195589	UTM-N	99225
	Latitude	0.896667	Longitude	36.265056

AB/2 (m)	Rho-a (Wm)
1.6	18.1
2.0	15.5
2.5	14.9
3.2	14.9
4.0	15.0
5.0	17.0
6.3	16.8
8.0	18.9
10.0	20.2
13.0	22.7
16.0	27.4
20.0	34.9
25.0	36.7
32.0	43.4
40.0	56.9
50.0	68.6
63.0	74.8
80.0	82.7
100.0	82.7
130.0	73.8
160.0	66.2
200.0	55.7



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
566	0.3	Dry top superficial layer	Dry.
14	7	Loose volcanic soils	Dry
119	80	Slightly weathered and fractured trachytes	Shallow aquifer expected.
20	>80	Weathered and fractured basalts and trachytes	Deep aquifers expected

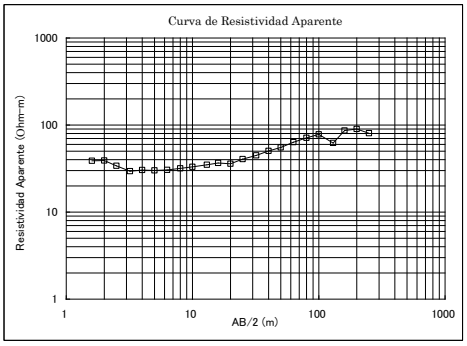


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

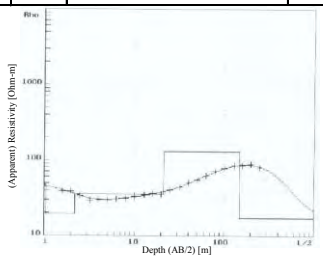
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Mondi
	Location	Loruk	Site No.	V-151
	Site Name	TUWO	Elevation	921
37N	UTM-E	172175	UTM-N	89789
	Latitude	0.811278	Longitude	36.054944

AB/2 (m)	Rho-a (Wm)
1.6	38.8
2.0	39.1
2.5	34.0
3.2	29.5
4.0	30.4
5.0	30.1
6.3	30.5
8.0	31.8
10.0	33.1
13.0	34.9
16.0	36.7
20.0	35.9
25.0	40.6
32.0	44.8
40.0	50.3
50.0	55.2
63.0	63.5
80.0	71.4
100.0	78.1
130.0	62.3
160.0	86.4
200.0	90.0
250.0	80.4



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
48	1.1	Dry top superficial layer	Dry.
19	2.2	Loose volcanic soils	Dry
36	21	Slightly weathered and fractured tuffs	moist
131	150	Weathered and fractured trachytes	Shallow aquifer expected.
17	>150	Highly weathered and fractured trachytes	Deep aquifer expected.

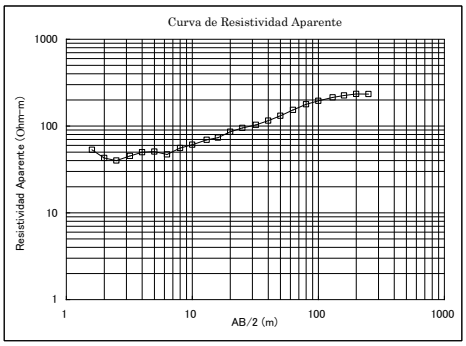


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

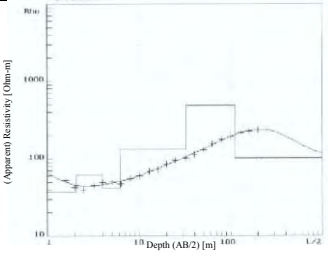
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Mondi
	Location	Loruk	Site No.	V-153-1
	Site Name	CHEBILAT	Elevation	
37N	UTM-E	169611	UTM-N	81365
	Latitude	0.735139	Longitude	36.031972

AB/2 (m)	Rho-a (Wm)
1.6	53.24
2.0	42.83
2.5	40.04
3.2	45.18
4.0	49.94
5.0	50.73
6.3	47.12
8.0	55.8
10.0	60.97
13.0	69.43
16.0	73.39
20.0	85.93
25.0	95.15
32.0	103.04
40.0	115.25
50.0	131.2
63.0	153.37
80.0	177.68
100.0	195.07
130.0	214.01
160.0	225.2
200.0	234.5
250.0	233.47



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
106	0-0.4	Dry top superficial layer and fractured tuff.	Dry. No aquifers
37	0.4-2	Slightly weathered and fractured tuff	Moist.
61	04-2	Highly weathered/ fractured basalts rocks.	Moist
42	06-4	Highly weathered and fractured basalts	Aquiferous
134	6-33	Weathered/ fractured basalt & trachytes	Aquiferous
480	33-112	Slightly weathered and fractured basalt	Aquiferous
102	>112	Highly weathered basalts & pyroclastics	Deep aquiferous Expected

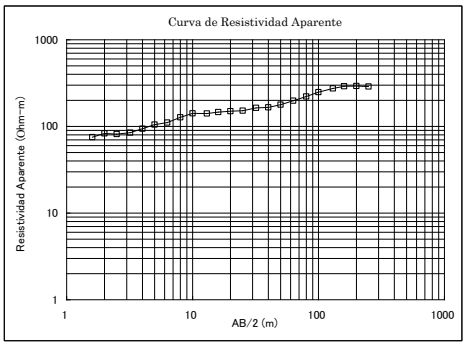


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

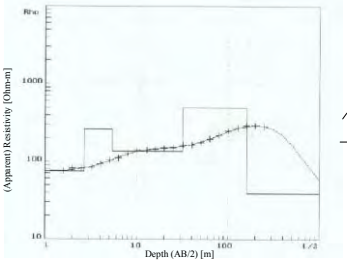
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Mondi
	Location	Loruk	Site No.	V-153-2
	Site Name	CHEBILAT	Elevation	1018
37N	UTM-E	169986	UTM-N	82622
	Latitude	0.746500	Longitude	36.035333

AB/2 (m)	Rho-a (Wm)
1.6	75.14
2.0	82.95
2.5	81.59
3.2	84.78
4.0	94.15
5.0	104.72
6.3	110.61
8.0	127.4
10.0	141.16
13.0	140.98
16.0	146.23
20.0	149.94
25.0	151.9
32.0	163.89
40.0	165.84
50.0	178.33
63.0	198.21
80.0	221.5
100.0	248.51
130.0	274.6
160.0	290.45
200.0	292.69
250.0	288.92



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
75	0-2.6	Dry top superficial layer and fractured tuffs.	Dry. No aquifers
263	2.6-5.4	Slightly weathered and fractured Basalt	Moist
137	5.4-32	Weathered and fractured basalt	Moist
493	32-162	Slightly weathered and fractured Basalt	Aquiferous
39	>162	Highly weathered pyroclastic rock	Deep aquiferous Expected

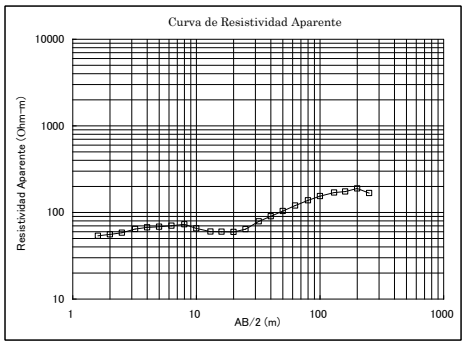


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

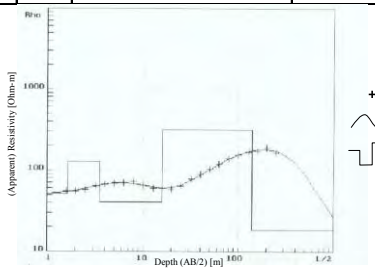
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Mondi
	Location	Loruk	Site No.	V-153-3
	Site Name	CHEBILAT	Elevation	
37N	UTM-E	169628	UTM-N	83329
	Latitude	0.752889	Longitude	36.032111

AB/2 (m)	Rho-a (Wm)
1.6	53.68
2.0	55.9
2.5	58.28
3.2	64.37
4.0	67.32
5.0	68.38
6.3	70.18
8.0	73
10.0	65.42
13.0	60.21
16.0	59.98
20.0	59.59
25.0	64.07
32.0	78.89
40.0	90.45
50.0	103.9
63.0	120.18
80.0	138.17
100.0	154.6
130.0	169.5
160.0	174.44
200.0	189.1
250.0	167.3



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
51	0-2	Thin dry top superficial layer	Dry.
129	04-2	Slightly weathered and fractured Tuffs	Dry. No aquifers
41	16-4	Slightly weathered/fractured tuffs & trachytes	Moist
313	16-140	Slightly weathered and fractured basalt	Aquiferous
18	>140	Highly weathered pyroclastic rock	Deep aquiferous Expected

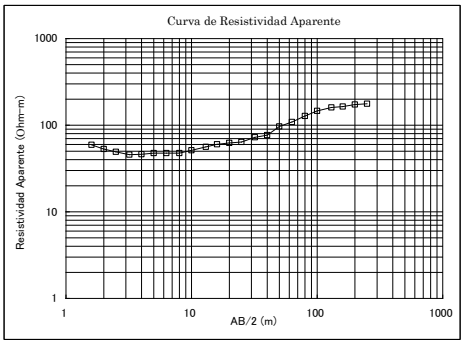


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

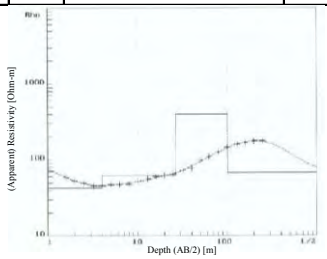
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Mondi
	Location	Loruk	Site No.	V-153-4
	Site Name	CHEBILAT	Elevation	
37N	UTM-E	169877	UTM-N	81315
	Latitude	0.734694	Longitude	36.034361

AB/2 (m)	Rho-a (Wm)
1.6	59.39
2.0	52.98
2.5	49.26
3.2	45.72
4.0	46.13
5.0	47.61
6.3	47.61
8.0	47.6
10.0	51.33
13.0	56.13
16.0	60.06
20.0	62.37
25.0	63.89
32.0	72.45
40.0	76.63
50.0	96.75
63.0	108.79
80.0	127.76
100.0	146.23
130.0	160.02
160.0	164.23
200.0	173.47
250.0	176.59



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
107	0-0.5	Dry top superficial layer and fractured tuffs	Dry. No aquifers
42	0.5-4	Slightly weathered tuffs	Moist.
62	26-4	Weathered Basalt	Moist
400	26-102	Slightly weathered basalt	Aquiferous
68	>102	Highly weathered basalts/pyroclastics rocks.	Deep aquiferous Expected

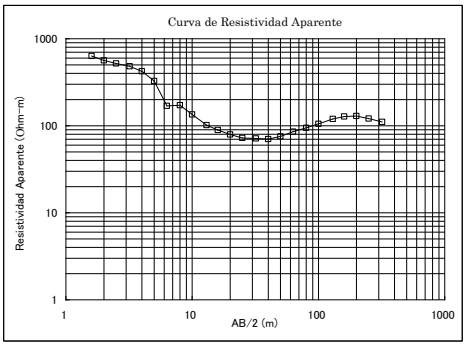


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

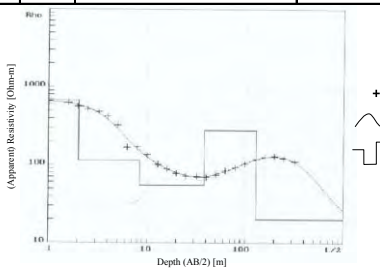
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Mondi
	Location	Naudo	Site No.	V-154
	Site Name	RIONGO	Elevation	895
37N	UTM-E	184914	UTM-N	109302
	Latitude	0.987694	Longitude	36.169139

AB/2 (m)	Rho-a (Wm)
1.6	631.6
2.0	564.0
2.5	520.0
3.2	482.0
4.0	422.7
5.0	326.8
6.3	168.9
8.0	172.1
10.0	134.9
13.0	101.8
16.0	89.3
20.0	79.4
25.0	72.5
32.0	71.5
40.0	70.3
50.0	75.5
63.0	85.6
80.0	94.7
100.0	105.1
130.0	119.7
160.0	127.8
200.0	129.5
250.0	121.0
320.0	110.6



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
667	2	Dry top superficial layer	Dry.
113	8	Loose volcanic soils	Dry
55	38	Slightly weathered and fractured trachytes	moist
278	130	Compact trachytes	No aquifer.
20	>130	Highly weathered and fractured trachytes	Deep aquifer expected.

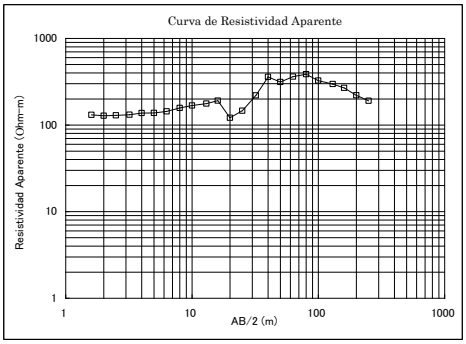


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

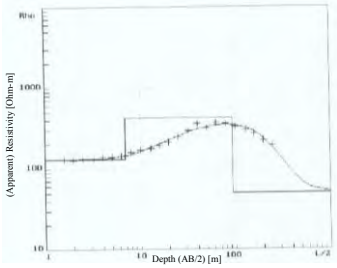
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Mondi
	Location	Naudo	Site No.	V-155
	Site Name	NAUDO	Elevation	869
37N	UTM-E	190458	UTM-N	113834
	Latitude	1.028639	Longitude	36.218861

AB/2 (m)	Rho-a (Wm)
1.6	131.0
2.0	127.8
2.5	129.2
3.2	131.6
4.0	137.6
5.0	138.0
6.3	143.5
8.0	157.6
10.0	168.1
13.0	176.5
16.0	191.1
20.0	121.2
25.0	146.0
32.0	219.9
40.0	360.0
50.0	314.0
63.0	362.0
80.0	386.0
100.0	325.7
130.0	297.6
160.0	268.5
200.0	220.6
250.0	190.8



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
131	0 -6.9	Dry top superficial layer.	Dry. No aquifers
428	6.9-94	Slightly weathered to compact basalt	No aquifer layer
50	>94	Highly weathered/fractured basalts	Aquiferous layer

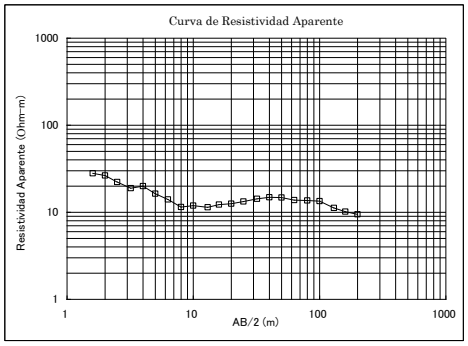


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

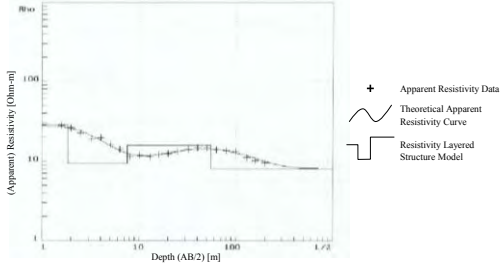
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Mondi
	Location	Naudo	Site No.	V-156
	Site Name	AKWICHATIS	Elevation	997
37N	UTM-E	202141	UTM-N	114568
	Latitude	1.035361	Longitude	36.323778

AB/2 (m)	Rho-a (Wm)
1.6	28.0
2.0	26.4
2.5	22.3
3.2	18.9
4.0	20.0
5.0	16.3
6.3	14.1
8.0	11.5
10.0	11.9
13.0	11.4
16.0	12.2
20.0	12.5
25.0	13.5
32.0	14.3
40.0	14.9
50.0	14.8
63.0	13.8
80.0	13.7
100.0	13.4
130.0	11.2
160.0	10.2
200.0	9.5



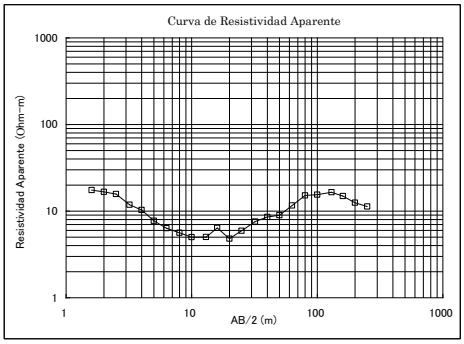
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
28.5	1.8	Dry top superficial layer	Dry.
9	8	Loose volcanic soils	Dry
16	55	Slightly weathered and fractured trachytes	Shallow aquifer expected.
8	>55	Highly weathered and fractured trachytes	Deep aquifer expected.



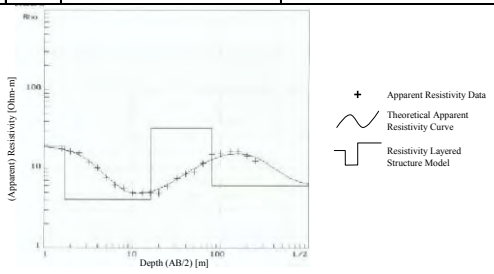
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Mondi
	Location	Naudo	Site No.	V-157
	Site Name	NASOROT	Elevation	930
37N	UTM-E	206484	UTM-N	130447
	Latitude	1.178944	Longitude	36.362639

AB/2 (m)	Rho-a (Wm)
1.6	17.5
2.0	16.7
2.5	15.8
3.2	11.8
4.0	10.3
5.0	7.7
6.3	6.2
8.0	5.6
10.0	5.0
13.0	5.0
16.0	6.4
20.0	4.8
25.0	5.9
32.0	7.6
40.0	8.6
50.0	9.0
63.0	11.6
80.0	15.2
100.0	15.5
130.0	16.5
160.0	14.9
200.0	12.5
250.0	11.3



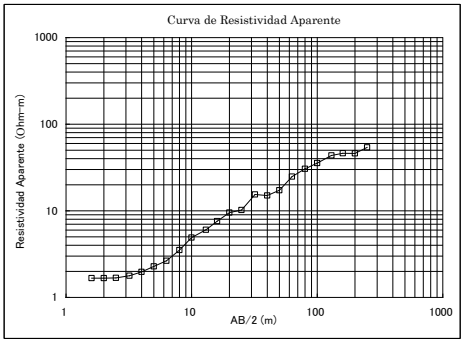
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
19.4	1.7	Dry top superficial layer	Dry.
4	16	Slightly weathered and fractured trachytes	moist
33	80	Highly weathered and fractured trachytes	Aquifer expected



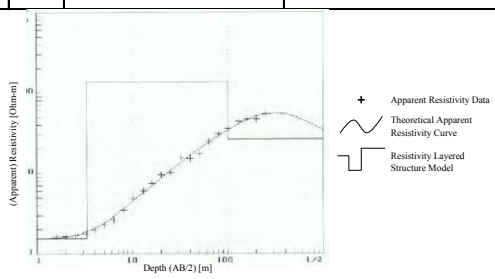
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Mondi
	Location	Silale	Site No.	V-159
	Site Name	CHEPTUNOYO	Elevation	835
37N	UTM-E	167982	UTM-N	107169
	Latitude	0.968278	Longitude	36.017167

AB/2 (m)	Rho-a (Wm)
1.6	1.7
2.0	1.7
2.5	1.7
3.2	1.8
4.0	2.0
5.0	2.3
6.3	2.7
8.0	3.5
10.0	4.9
13.0	6.0
16.0	7.6
20.0	9.5
25.0	10.2
32.0	15.4
40.0	15.0
50.0	17.3
63.0	24.8
80.0	30.5
100.0	35.5
130.0	43.5
160.0	46.2
200.0	46.0
250.0	53.9



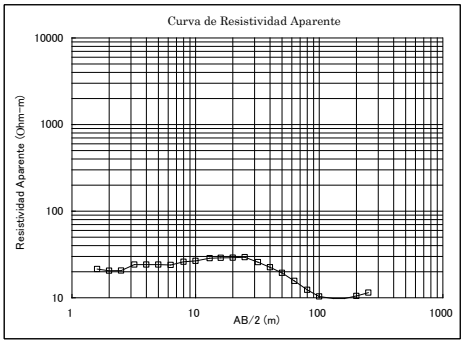
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
1.5	3.3	Dry top superficial layer	Dry.
137	100	Slightly weathered and fractured trachytes	moist
26	>100	Weathered and fractured trachytes	Aquifer expected in this zone.



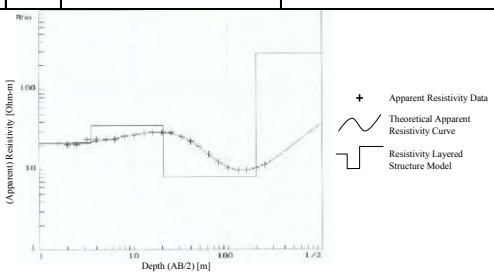
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Mondi
	Location	Loyamorok	Site No.	V-160
	Site Name	KASIOKON	Elevation	875
36N	UTM-E	832265	UTM-N	94457
	Latitude	0.853417	Longitude	35.984944

AB/2 (m)	Rho-a (Wm)
1.6	21.5
2.0	20.6
2.5	20.6
3.2	24.1
4.0	24.1
5.0	24.1
6.3	23.9
8.0	26.0
10.0	26.6
13.0	28.6
16.0	28.9
20.0	29.0
25.0	29.4
32.0	25.8
40.0	22.5
50.0	19.4
63.0	15.6
80.0	12.3
100.0	10.4
130.0	9.8
160.0	9.8
200.0	10.5
250.0	11.5



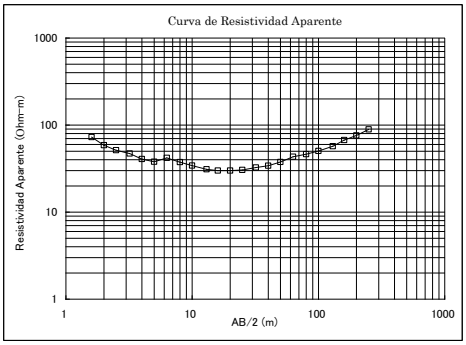
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
21.5	3.5	Dry top superficial layer	Dry.
36	21	Loose volcanic soils	Dry
8	200	Slightly weathered and fractured trachytes	Shallow aquifer expected.
282	>200	Compact trachytes	No aquifer expected.



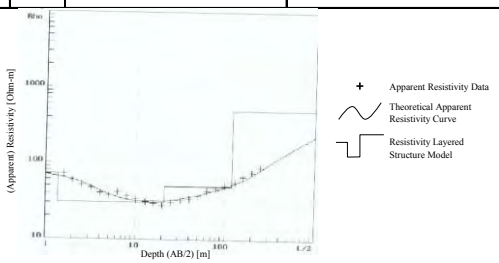
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Kolowa
	Location	Kolowa	Site No.	V-163
	Site Name	CHEPTURU	Elevation	1040
36N	UTM-E	813109	UTM-N	130015
	Latitude	1.174861	Longitude	35.813278

AB/2 (m)	Rho-a (Wm)
1.6	72.6
2.0	58.8
2.5	51.5
3.2	47.0
4.0	40.7
5.0	38.0
6.3	42.0
8.0	37.5
10.0	34.2
13.0	31.1
16.0	30.0
20.0	30.0
25.0	30.5
32.0	32.6
40.0	34.1
50.0	37.6
63.0	43.3
80.0	46.3
100.0	50.4
130.0	57.1
160.0	67.2
200.0	76.1
250.0	89.2



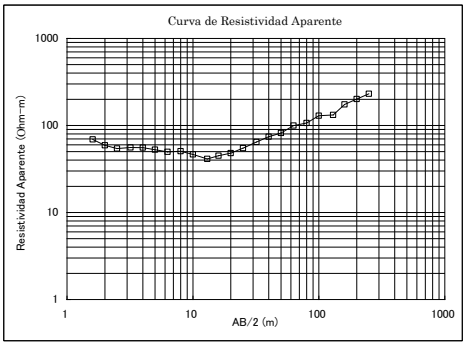
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
71.9	1.4	Dry top superficial layer	Dry.
31	21	Loose volcanic soils	Dry.
50	120	Slightly weathered and fractured trachytes	Shallow aquifer expected.
500	>120	Highly weathered and fractured trachytes	Deep aquifer expected.



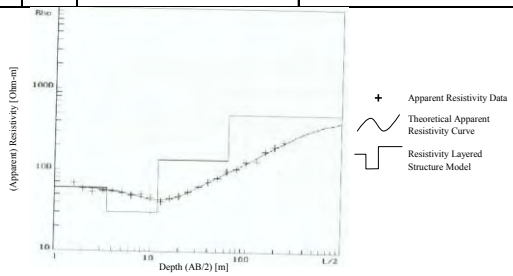
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Kolowa
	Location	Ng'oron	Site No.	V-165
	Site Name	NGORON	Elevation	992
36N	UTM-E	810040	UTM-N	142481
	Latitude	1.287528	Longitude	35.785833

AB/2 (m)	Rho-a (Wm)
1.6	69.0
2.0	59.1
2.5	54.3
3.2	55.8
4.0	55.6
5.0	52.6
6.3	49.8
8.0	50.6
10.0	46.5
13.0	41.3
16.0	45.0
20.0	48.0
25.0	54.9
32.0	64.6
40.0	74.2
50.0	81.9
63.0	99.7
80.0	106.8
100.0	129.3
130.0	132.2
160.0	174.7
200.0	201.0
250.0	230.7



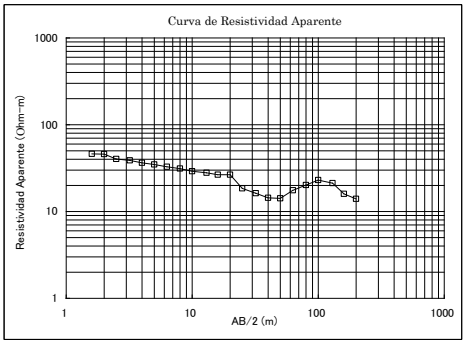
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
60.6	3.6	Dry top superficial layer	Dry.
31	12	Loose volcanic soils	Dry
136	65	Slightly weathered and fractured trachytes	Shallow aquifer expected.
500	>65	Highly weathered and fractured trachytes	Deep aquifer expected.



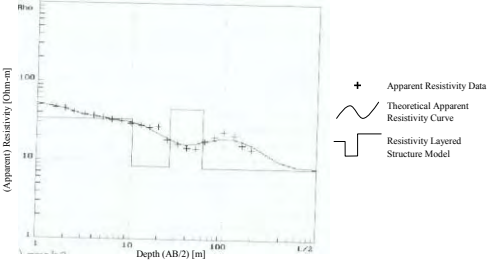
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Kolowa
	Location	Loiwat	Site No.	V-168
	Site Name	CHEPELION	Elevation	1022
36N	UTM-E	804322	UTM-N	117721
	Latitude	1.063833	Longitude	35.734278

AB/2 (m)	Rho-a (Wm)
1.6	46.2
2.0	45.8
2.5	40.3
3.2	38.8
4.0	36.4
5.0	34.8
6.3	32.8
8.0	31.3
10.0	29.1
13.0	27.9
16.0	26.5
20.0	26.5
25.0	18.5
32.0	16.2
40.0	14.4
50.0	14.2
63.0	17.6
80.0	20.2
100.0	23.1
130.0	21.2
160.0	16.0
200.0	14.0



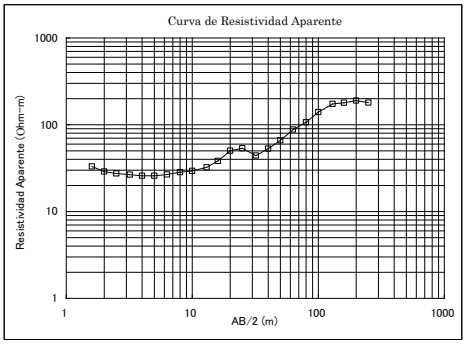
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
55.6	0.8	Dry top superficial layer	Dry.
33	10	Loose volcanic soils	Dry
9	26	Slightly weathered and fractured trachytes	moist
46	60	Weathered and fractured trachytes	Shallow aquifer expected.
8	>60	Highly weathered and fractured trachytes	Deep aquifer expected.



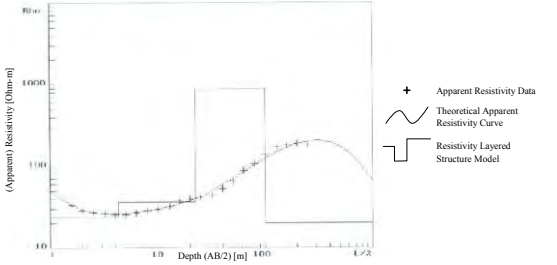
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Kolowa
	Location	Kipnai	Site No.	V-169
	Site Name	KERELON	Elevation	1308
36N	UTM-E	816079	UTM-N	115969
	Latitude	1.047917	Longitude	35.839833

AB/2 (m)	Rho-a (Wm)
1.6	33.1
2.0	28.9
2.5	27.5
3.2	26.6
4.0	25.9
5.0	25.8
6.3	26.7
8.0	28.4
10.0	29.4
13.0	32.3
16.0	38.3
20.0	50.2
25.0	53.6
32.0	44.2
40.0	53.0
50.0	66.1
63.0	87.8
80.0	106.8
100.0	139.9
130.0	174.1
160.0	179.0
200.0	190.0
250.0	180.0



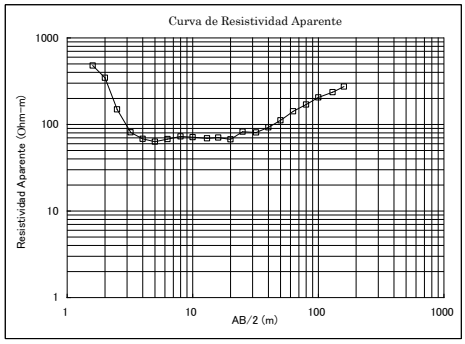
Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
94	0.4	Dry top superficial layer	Dry.
24	4	Loose volcanic soils	Dry
37	22	Slightly weathered and fractured trachytes	Shallow aquifer expected.
874	100	Fresh trachytic formations	No aquifers expected
20	>100	Highly weathered and fractured trachytes	Deep aquifer expected.



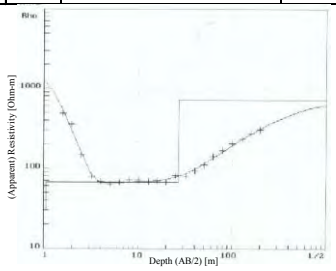
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Churo
	Location	Churo	Site No.	V-171
	Site Name	NAMINITO	Elevation	1849
37N	UTM-E	215609	UTM-N	89221
	Latitude	0.806361	Longitude	36.444833

AB/2 (m)	Rho-a (Wm)
1.6	479.5
2.0	345.9
2.5	149.4
3.2	80.9
4.0	68.2
5.0	63.2
6.3	67.7
8.0	72.7
10.0	71.4
13.0	69.1
16.0	70.6
20.0	67.2
25.0	82.6
32.0	80.9
40.0	92.7
50.0	111.6
63.0	141.7
80.0	170.0
100.0	205.4
130.0	236.0
160.0	273.5



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
2204	0.6	Dry top superficial layer	Dry.
30	1	Loose volcanic soils	Dry
68	27	Slightly weathered and fractured trachytes	Shallow aquifer expected.
717	>27	Compact trachytes	No aquifer expected.

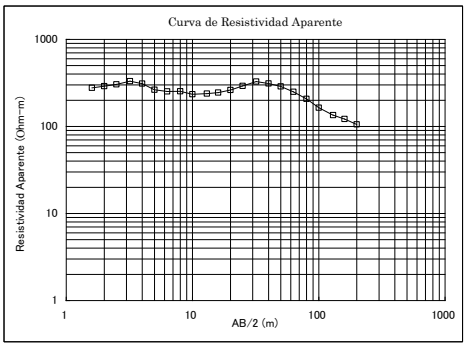


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

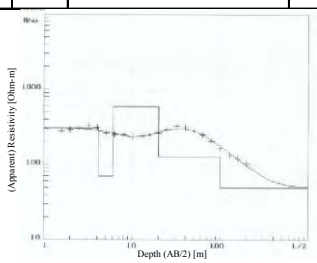
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Churo
	Location	Churo	Site No.	V-176
	Site Name	KOMOLWO	Elevation	1729
37N	UTM-E	210708	UTM-N	87375
	Latitude	0.789694	Longitude	36.400864

AB/2 (m)	Rho-a (Wm)
1.6	277.7
2.0	290.2
2.5	304.2
3.2	331.0
4.0	310.4
5.0	264.2
6.3	252.0
8.0	253.4
10.0	234.6
13.0	238.6
16.0	245.0
20.0	261.8
25.0	292.3
32.0	327.5
40.0	311.6
50.0	288.4
63.0	250.2
80.0	207.4
100.0	163.9
130.0	134.8
160.0	121.6
200.0	105.6



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
307	4.1	Dry top superficial layer	Dry.
70	6	Loose volcanic soils	Dry
597	20	Compact trachytes	Dry
127	100	Weathered and fractured trachytes	Shallow aquifer expected.
50	>100	Highly weathered and fractured trachytes	Deep aquifer expected.

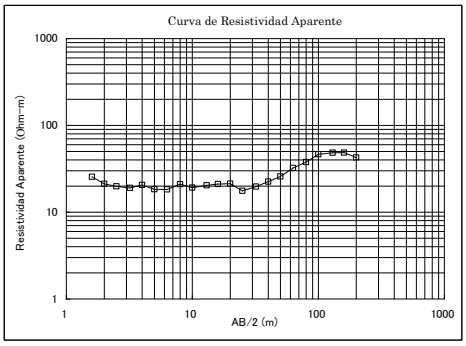


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

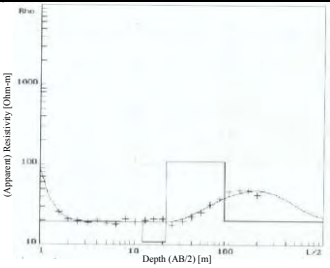
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Churo
	Location	Kaptuya	Site No.	V-179
	Site Name	LOMERIMERI	Elevation	1458
37N	UTM-E	202526	UTM-N	85734
	Latitude	0.775167	Longitude	36.327278

AB/2 (m)	Rho-a (Wm)
1.6	25.6
2.0	21.2
2.5	19.8
3.2	19.0
4.0	20.6
5.0	18.3
6.3	18.3
8.0	21.1
10.0	19.2
13.0	20.4
16.0	21.1
20.0	21.3
25.0	17.6
32.0	19.7
40.0	22.5
50.0	25.8
63.0	32.3
80.0	37.8
100.0	46.5
130.0	48.3
160.0	48.5
200.0	42.6



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
1312	0.3	Dry top superficial layer	Dry.
19	12	Loose volcanic soils	Dry
11	22	Slightly weathered and fractured trachytes	Dry
109	90	Weathered and fractured trachytes	Shallow aquifer expected.
20	>90	Highly weathered and fractured trachytes	Deep aquifer expected.

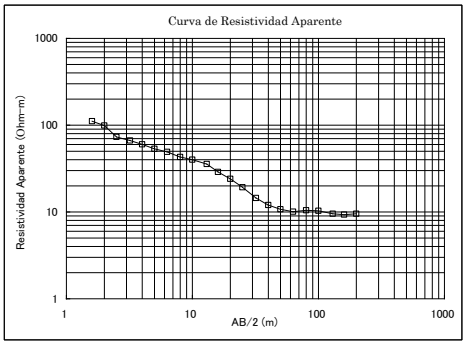


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

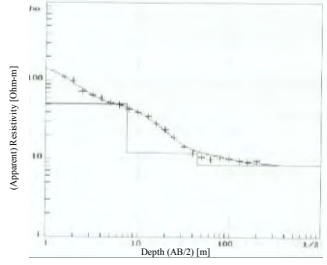
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Nginyany
	Location	Kositei	Site No.	V-181
	Site Name	KATIKIT	Elevation	1122
36N	UTM-E	820204	UTM-N	104631
	Latitude	0.945444	Longitude	35.876667

AB/2 (m)	Rho-a (Wm)
1.6	111.1
2.0	99.0
2.5	73.1
3.2	66.6
4.0	60.2
5.0	53.4
6.3	49.2
8.0	43.0
10.0	40.1
13.0	35.6
16.0	28.9
20.0	24.1
25.0	19.2
32.0	14.5
40.0	12.0
50.0	10.7
63.0	10.1
80.0	10.5
100.0	10.3
130.0	9.5
160.0	9.3
200.0	9.6



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
164	0.8	Dry top superficial layer	Dry.
50	8	Loose volcanic soils	Dry
12	45	Slightly weathered and fractured trachytes	Shallow aquifer expected.
8	>90	Highly weathered and fractured trachytes	Deep aquifer expected.

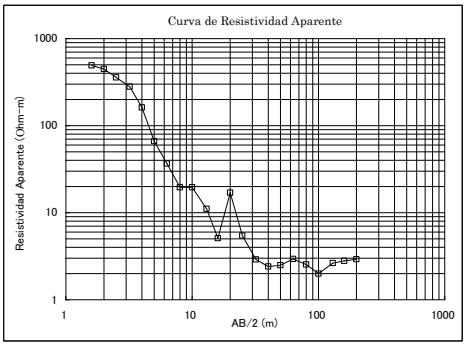


Apparent Resistivity Data
Theoretical Apparent Resistivity Curve
Resistivity Layered Structure Model

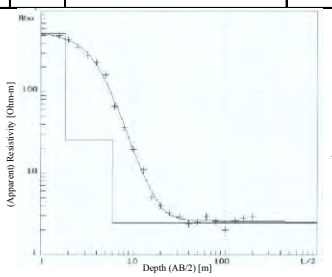
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Nginyany
	Location	Ribko	Site No.	V-182
	Site Name	CHEPANOA	Elevation	1065
36N	UTM-E	820945	UTM-N	118453
	Latitude	1.070306	Longitude	35.883528

AB/2 (m)	Rho-a (Wm)
1.6	493.0
2.0	448.0
2.5	358.0
3.2	280.0
4.0	162.0
5.0	66.3
6.3	36.7
8.0	19.6
10.0	19.6
13.0	11.1
16.0	5.1
20.0	17.0
25.0	5.5
32.0	2.9
40.0	2.4
50.0	2.5
63.0	2.9
80.0	2.5
100.0	2.0
130.0	2.6
160.0	2.8
200.0	2.9



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
533	1.8	Dry top superficial layer	Dry.
26	6	Slightly weathered and fractured trachytes	Moist
3	>6	Highly weathered and fractured trachytes	Deep aquifer expected.



+ Apparent Resistivity Data

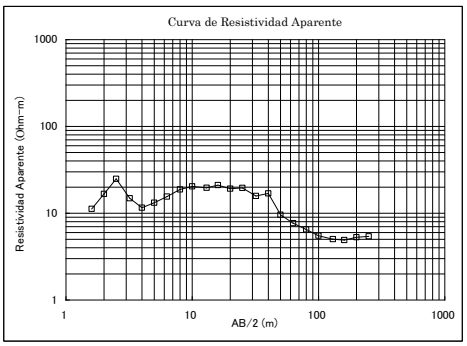
Theoretical Apparent Resistivity Curve

Resistivity Layered Structure Model

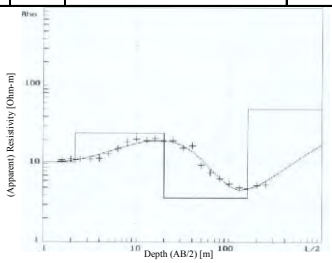
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Nginyany
	Location	Kositei	Site No.	V-184
	Site Name	KATUKUMWO	Elevation	
36N	UTM-E	832502	UTM-N	105087
	Latitude	0.949444	Longitude	35.987139

AB/2 (m)	Rho-a (Wm)
1.6	11.2
2.0	16.7
2.5	24.9
3.2	14.9
4.0	11.6
5.0	13.2
6.3	15.5
8.0	18.8
10.0	20.4
13.0	19.7
16.0	21.1
20.0	19.2
25.0	19.6
32.0	15.8
40.0	16.9
50.0	9.6
63.0	7.7
80.0	6.5
100.0	5.5
130.0	5.0
160.0	4.9
200.0	5.3
250.0	5.4



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
10	2.2	Dry top superficial layer	Dry.
24	20	Loose volcanic soils	Dry.
4	160	Slightly weathered and fractured trachytes	Shallow aquifer expected.
50	>160	Highly weathered and fractured trachytes	Deep aquifer expected.



+ Apparent Resistivity Data

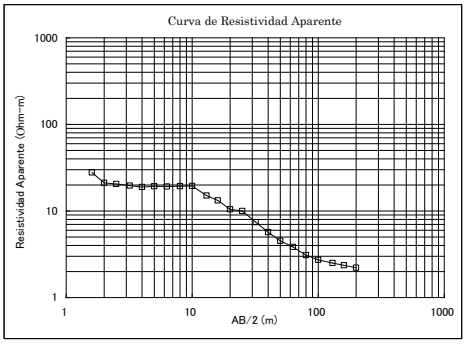
Theoretical Apparent Resistivity Curve

Resistivity Layered Structure Model

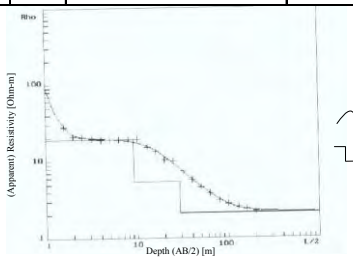
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Nginyany
	Location	Ribko	Site No.	V-185-1
	Site Name	CHESAKAM	Elevation	816
37N	UTM-E	169103	UTM-N	114295
	Latitude	1.032667	Longitude	36.027167

AB/2 (m)	Rho-a (Wm)
1.6	27.81
2.0	21.19
2.5	20.51
3.2	19.63
4.0	18.91
5.0	19.29
6.3	19.16
8.0	19.4
10.0	19.41
13.0	15.08
16.0	13.24
20.0	10.46
25.0	10
32.0	7.41
40.0	5.69
50.0	4.52
63.0	3.84
80.0	3.09
100.0	2.73
130.0	2.51
160.0	2.36
200.0	2.21



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
844	0-0.3	Dry top superficial layer and fractured tuff.	Dry. No aquifers
20	0.3-9	Slightly weathered and fractured tuff	Moist.
5.4	29-9	Highly weathered and fractured basalts rocks.	Aquiferous layer
2	>29	Clays/silty/highly decomposed pyroclastics	Clays/ salty aquifer



+ Apparent Resistivity Data

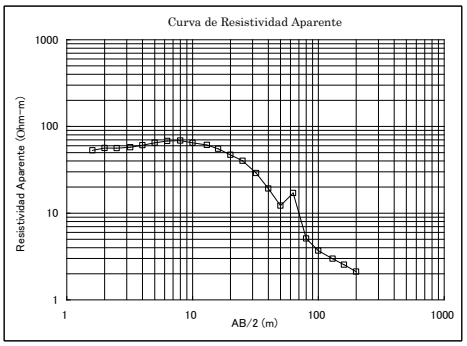
Theoretical Apparent Resistivity Curve

Resistivity Layered Structure Model

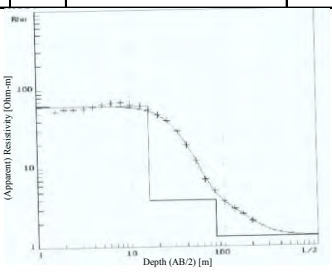
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Nginyany
	Location	Ribko	Site No.	V-185-2
	Site Name	CHESAKAM	Elevation	811
37N	UTM-E	169334	UTM-N	114145
	Latitude	1.031306	Longitude	36.029250

AB/2 (m)	Rho-a (Wm)
1.6	52.99
2.0	56.4
2.5	56.21
3.2	57.56
4.0	60.69
5.0	64.81
6.3	67.95
8.0	68.6
10.0	64.79
13.0	61.22
16.0	55.33
20.0	47.12
25.0	40.18
32.0	28.98
40.0	19.21
50.0	12.21
63.0	17.05
80.0	5.1
100.0	3.69
130.0	2.98
160.0	2.54
200.0	2.12



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
683	0-0.1	Thin dry top superficial layer	Dry.
62	0.1-16	Slightly weathered and fractured tuff	Moist
4	16-81	Highly weathered and fractured basalt	Aquiferous
1	>81	Highly weathered pyroclastic rock	Clays/ salty aquifer



+ Apparent Resistivity Data

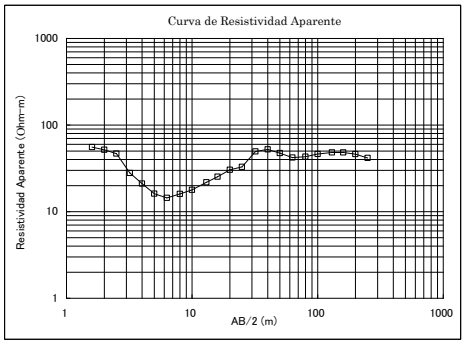
Theoretical Apparent Resistivity Curve

Resistivity Layered Structure Model

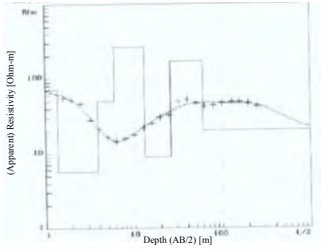
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Nginyany
	Location	Ribko	Site No.	V-185-3
	Site Name	CHESAKAM	Elevation	796
37N	UTM-E	169657	UTM-N	113961
	Latitude	1.029492	Longitude	36.032056

AB/2 (m)	Rho-a (Wm)
1.6	55.61
2.0	51.8
2.5	46.82
3.2	27.95
4.0	21.09
5.0	16.12
6.3	14.4
8.0	16
10.0	17.84
13.0	21.84
16.0	25.3
20.0	30.37
25.0	32.93
32.0	49.6
40.0	52.29
50.0	47.38
63.0	42.15
80.0	43.1
100.0	46.29
130.0	48.2
160.0	48.3
200.0	46.2
250.0	41.7



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
73	0-1.4	Dry top superficial layer and fractured tuff	Dry. No aquifers
6	1.4-4	Highly weathered and fractured tuff	Moist.
50	06-4	Weathered and fractured basalt	Moist
260	13-6	Slightly weathered and fractured basalt	Moist
9	13-26	Highly weathered and fractured basalt	Aquiferous
169	26-61	Weathered and fractured basalt	Aquiferous
20	>61	Highly weathered pyroclastics/basalt	Deep aquifer



+ Apparent Resistivity Data

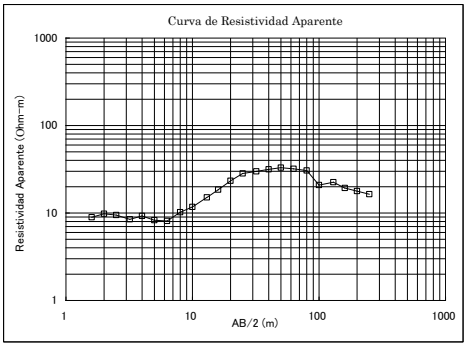
Theoretical Apparent Resistivity Curve

Resistivity Layered Structure Model

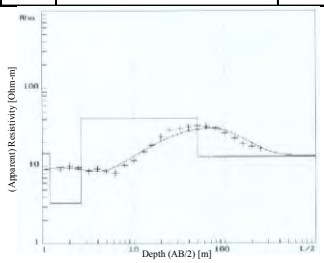
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Nginyany
	Location	Ribko	Site No.	V-186
	Site Name	CHESITET	Elevation	
37N	UTM-E	174743	UTM-N	122326
	Latitude	1.105583	Longitude	36.077750

AB/2 (m)	Rho-a (Wm)
1.6	8.9
2.0	9.8
2.5	9.5
3.2	8.5
4.0	9.2
5.0	8.3
6.3	8.1
8.0	10.2
10.0	11.7
13.0	15.1
16.0	18.5
20.0	23.3
25.0	28.3
32.0	30.0
40.0	31.6
50.0	33.0
63.0	32.0
80.0	30.6
100.0	20.9
130.0	22.5
160.0	19.3
200.0	17.8
250.0	16.4



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
7	0.4	Dry top superficial layer	Dry.
15	1.2	Compact volcanic soils	Dry
3	3	Loose volcanic soils	Dry
41	50	Slightly weathered and fractured trachytes	Shallow aquifer expected.
13	>50	Highly weathered and fractured trachytes	Deep aquifer expected.



+ Apparent Resistivity Data

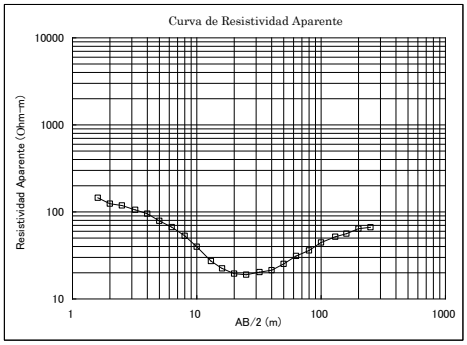
Theoretical Apparent Resistivity Curve

Resistivity Layered Structure Model

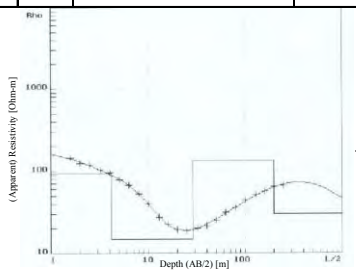
Vertical Electric Sounding Datasheet (Schlumberger)

	District	East Pokot	Division	Nginyany
	Location	Ribko	Site No.	V-190
	Site Name	MARON	Elevation	1386
36N	UTM-E	823540	UTM-N	126552
	Latitude	1.143472	Longitude	35.906889

AB/2 (m)	Rho-a (Wm)
1.6	145.1
2.0	124.4
2.5	118.6
3.2	105.5
4.0	95.4
5.0	78.8
6.3	66.7
8.0	53.0
10.0	39.8
13.0	27.2
16.0	22.4
20.0	19.5
25.0	19.0
32.0	20.3
40.0	21.4
50.0	25.2
63.0	31.1
80.0	36.0
100.0	44.4
130.0	51.8
160.0	56.1
200.0	64.1
250.0	66.5



Resistivity (Ohm.m)	Depth (m)	Geological Interpretation	Hydrogeological Interpretation
174	0.8	Dry top superficial layer	Dry.
94	4.1	Compact volcanic soils	Dry
15	29	Loose volcanic soils	Dry
132	200	Slightly weathered and fractured trachytes	Shallow aquifer expected.
30	>200	Highly weathered and fractured trachytes	Deep aquifer expected.



+ Apparent Resistivity Data

Theoretical Apparent Resistivity Curve

Resistivity Layered Structure Model

Borehole Drilling Log

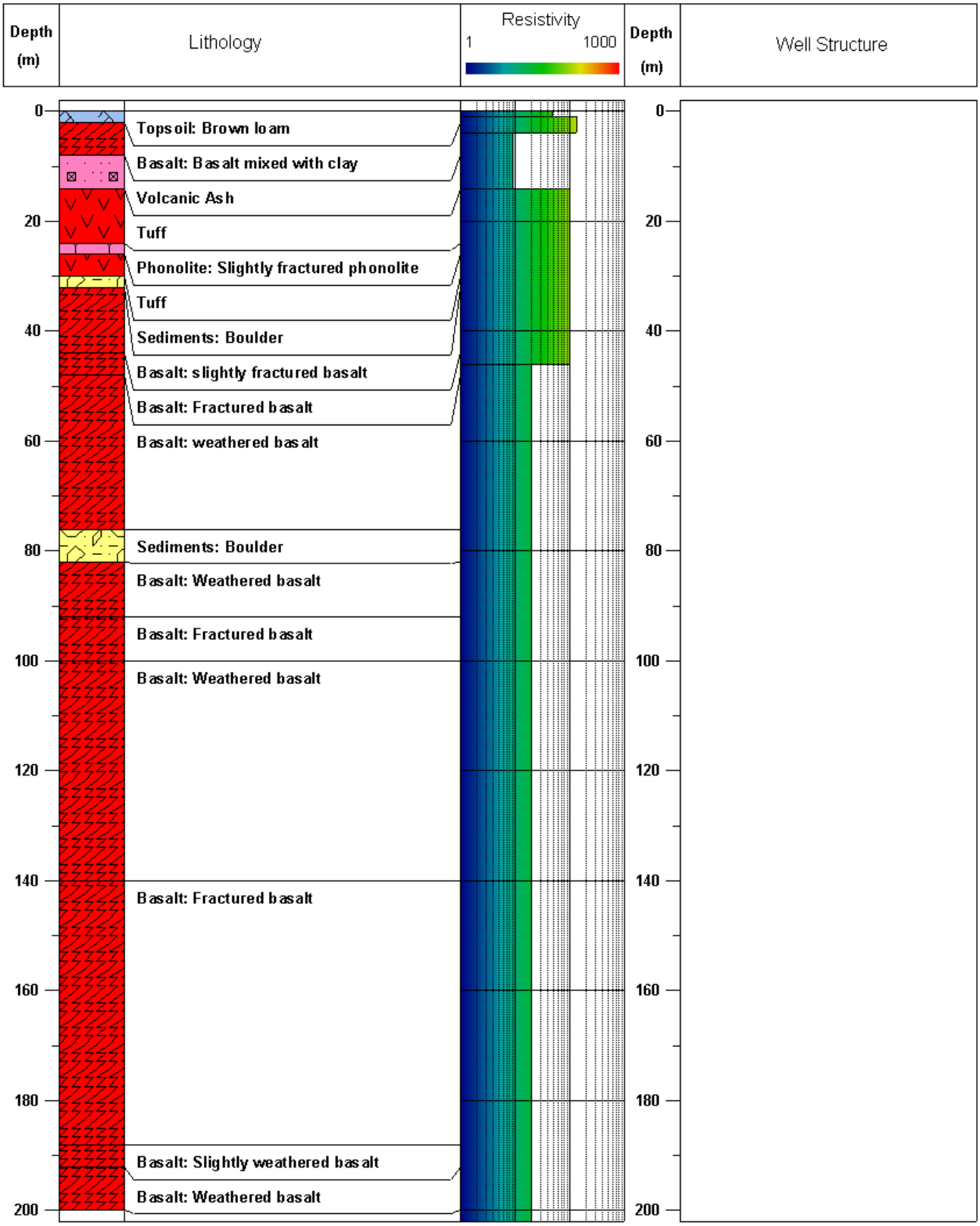
Site No.: **24** Site Name: **Toboroi**

District: Baringo North Division: Bartabwa Location: Kinyach Drillied Depth: 204 m

Latitude: 0 ° 53 ' 9.24 " N Static Water Level: - m

Longitude: 35 ° 47 ' 35.32 " E Altitude: 1469 m Pumping Rate: - m3/hour

UTM 36N X: 810894 m Y: 98036 m (Datum: Arc60) Dynamic Water Level: - m



Borehole Drilling Log

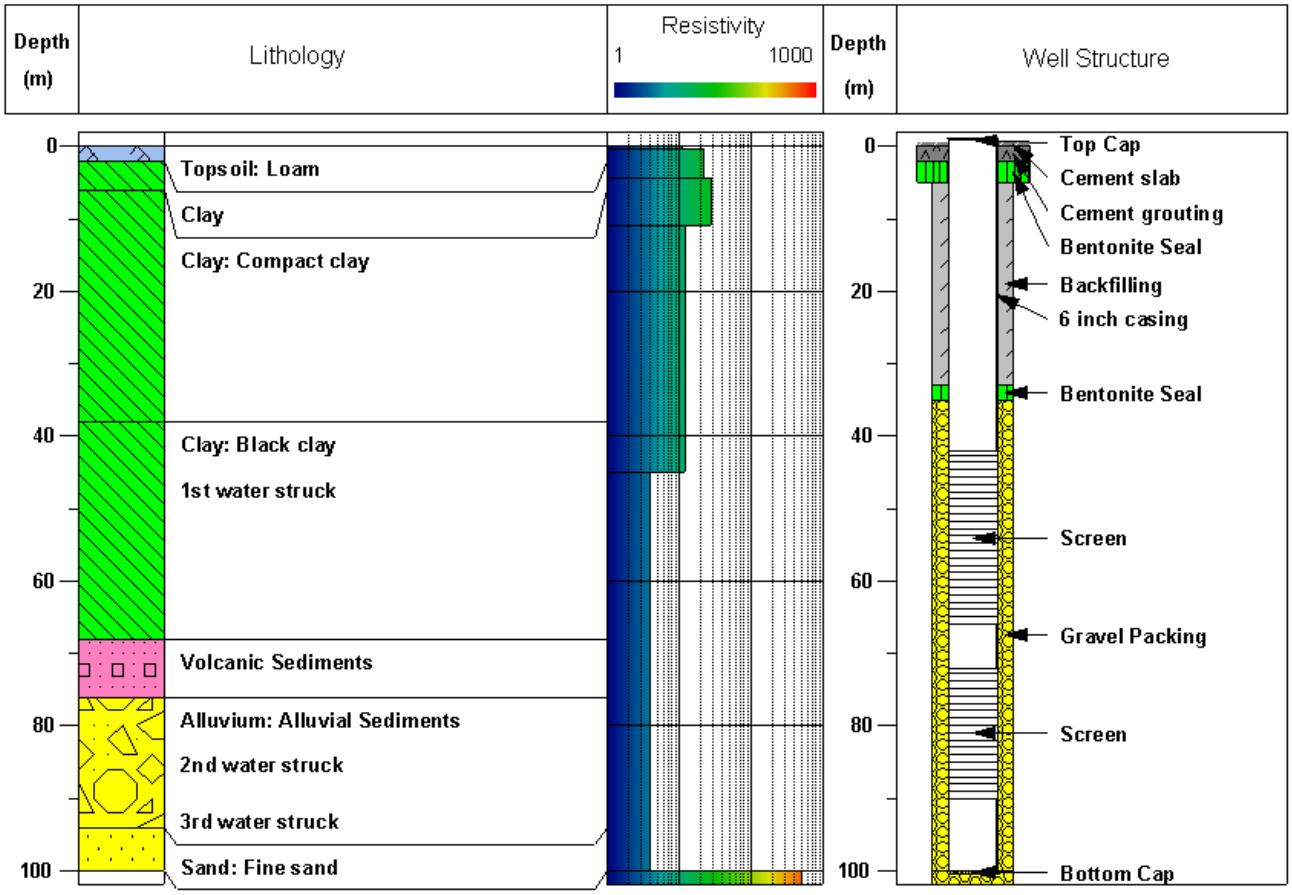
Site No.: **67** Site Name: **Lesuuwa**

District: Marigat Division: Marigat Location: Ng'ambo Drillied Depth: 100 m

Latitude: 0 ° 28 ' 41.91 " N Static Water Level: 18.3 m

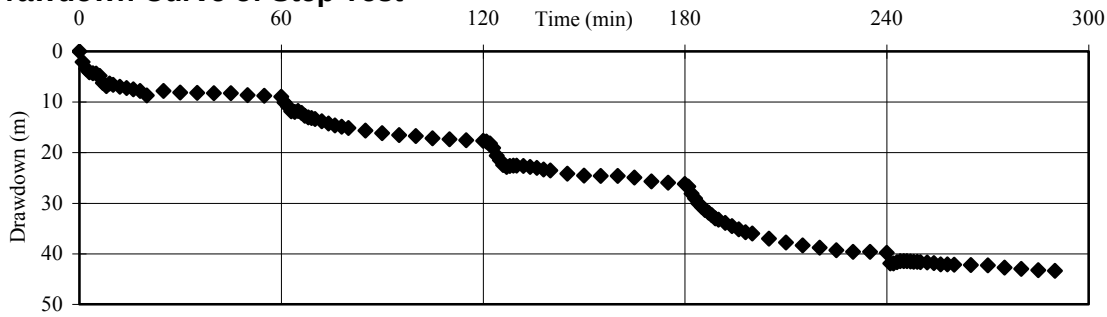
Longitude: 36 ° 4 ' 19.03 " E Altitude: 993 m Pumping Rate: 3 m3/hour

UTM 37N X: 174050 m Y: 52937 m (Datum: Arc60) Dynamic Water Level: 27.75 m

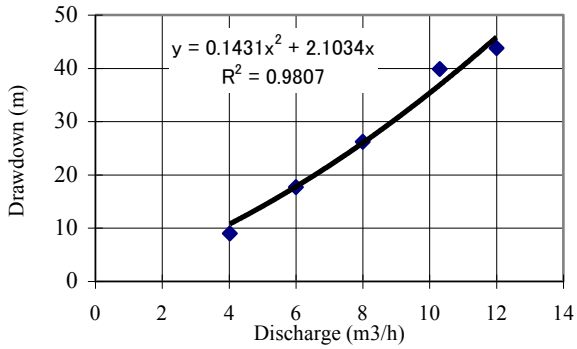


Pumping Test Analysis for Lesuuwa (67) Borehole

Drawdown Curve of Step Test



Step Test Analysis



Critical Yield 4.00 m^3/h

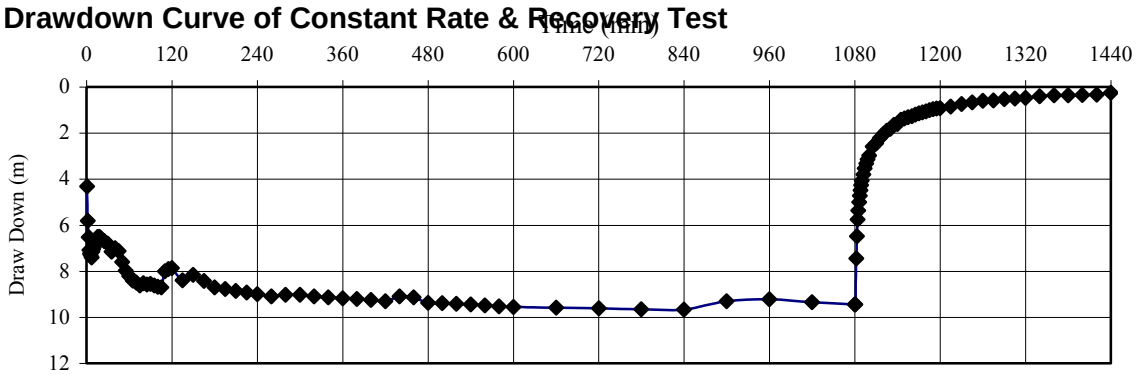
Safe Yield 3.20 m^3/h

$s=BQ+CQ^2$

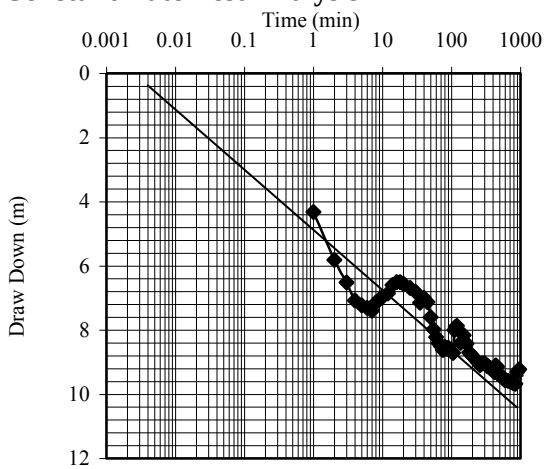
B= 2.1034

C= 0.1431

Drawdown Curve of Constant Rate & Recovery Test



Constant Rate Test Analysis



Q: 3.02 m^3/h

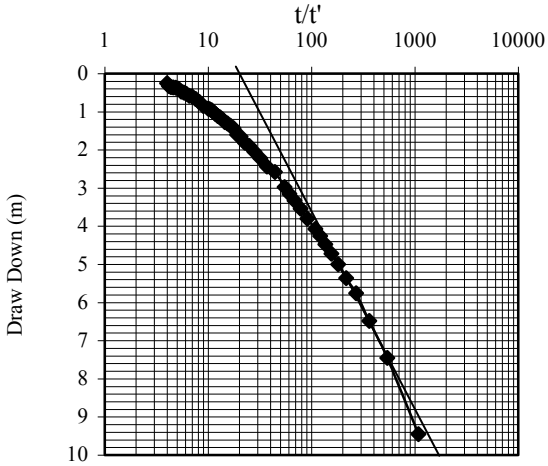
Δs 1.8 m

t0 0.0023 min

Transmissivity = 0.307081 m^2/h

Storage Coefficient = 0.002649

Recovery Test Analysis



Q: 3.02 m^3/h

Δs 5.0 m

Transmissivity = 0.110549 m^2/h

RIFT VALLEY WATER SERVICES BOARD
Telephone : (051) 2213557
MAJI PLAZA
PRISONS ROAD ROAD
P.O. Box 2451
NAKURU

PHYSICAL/CHEMICAL WATER ANALYSIS REPORT

Sample No. 47/011
Source LESUVA B/H
Purpose of sampling DOMESTIC

Date of Sampling: 18/4/011
Date received: 19/4/011
Submitted by: JIKA
Address: MARIGATI

PARAMETERS	UNIT	RESULTS	REMARKS
pH	pH Scale	8.02	
Turbidity	N.T.U	5.48	
Colour	mgPt/l	Yellow-black	
Permanganate value (20 min boiling)	mgO_2/l	4.8	
Conductivity	µS/cm	5460.0	
Iron	mgFe/l	0.28	
Manganese	mgMn/l	NIL	
Arsenic	mgAs/l	0.004	
Calcium	mgCa/l	8.0	
Magnesium	mgMg/l	NIL	
Total Hardness	$mgCaCO_3/l$	NIL	
Total Alkalinity	$mgCaCO_3/l$	1876.0	
Bicarbonate	$MgHCO_3/l$	2287.0	
Chloride	mgCl/l	290.0	
Fluoride	mgF/l	17.1	
Nitrite	mgN/l	0.007	
Nitrate	mgN/l	0.2	
Ammonia	mgN/l	7.75	
Sulphate(filtered)	$mgSO_4/l$	245.0	
Orthophosphate	mgP/l	6.85	
Total Suspended Solids	mg/l	>5	
Free Carbon Dioxide	$mgCO_2/l$	16.0	
Total Dissolved Solids	mg/l	2730.0	
Chlorine Concentration	mgCl/l	NIL	
Zinc	mgZn/l	NIL	
BOD	mg/l	5.0	
COD	mg/l	157.0	
Copper	mgCu/l	NIL	
Chromium	mgCr/l	NIL	
Aluminium	mgAl/l	NIL	

Borehole Drilling Log

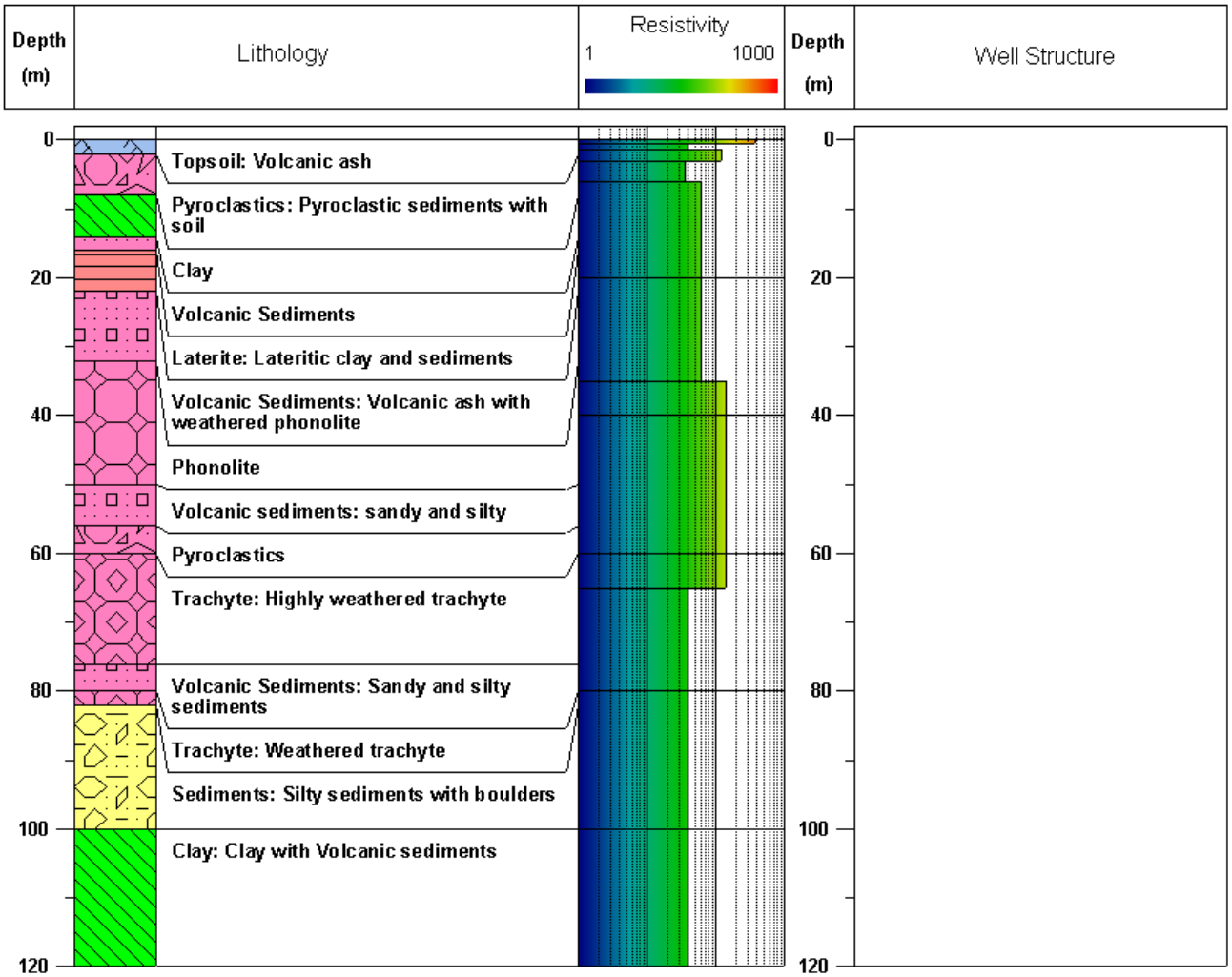
Site No.: **86** Site Name: **Samuran**

District: Marigat Division: Marigat Location: Sandai Drillied Depth: 120 m

Latitude: 0 ° 22 ' 20.05 " N Static Water Level: - m

Longitude: 36 ° 6 ' 30.45 " E Altitude: 1153 m Pumping Rate: - m3/hour

UTM 37N X: 178113 m Y: 41196 m (Datum: Arc60) Dynamic Water Level: - m



Borehole Drilling Log

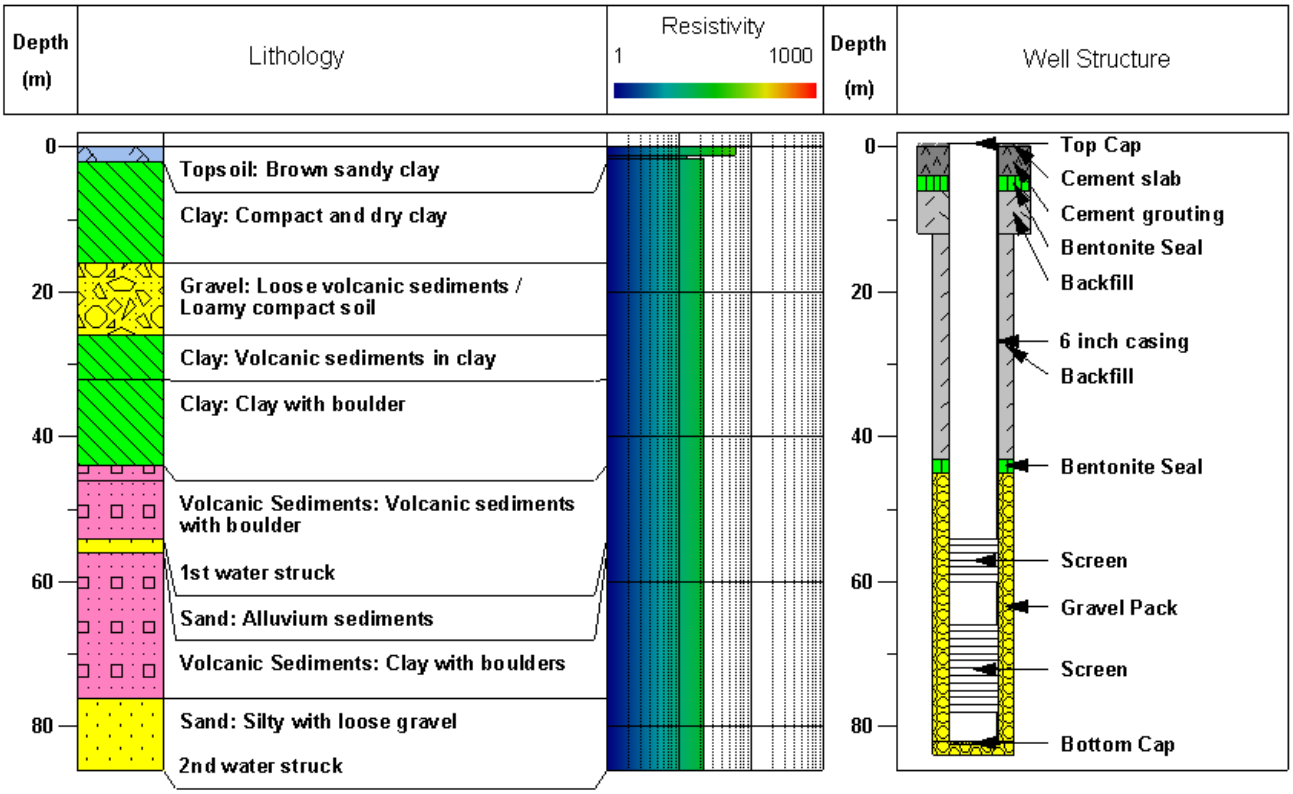
Site No.: **103** Site Name: **Kakwane**

District: Baringo Division: Salawa Location: Lelmen Drillied Depth: 86 m

Latitude: 0 ° 31 ' 14.46 " N Static Water Level: 39.55 m

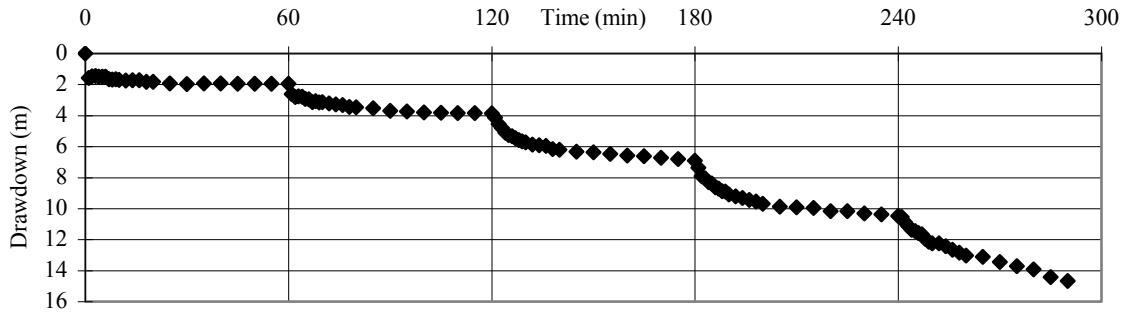
Longitude: 35 ° 37 ' 16.47 " E Altitude: 1110 m Pumping Rate: 5.6 m3/hour

UTM 36N X: 791769 m Y: 57612 m (Datum: Arc60) Dynamic Water Level: 47.94 m

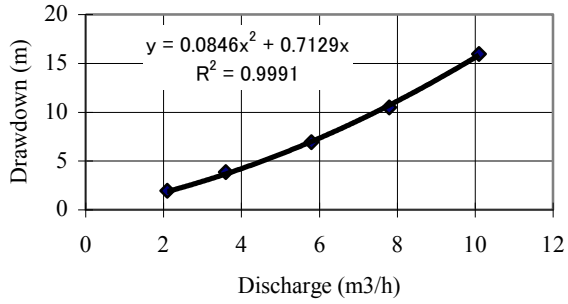


Pumping Test Analysis for Kakwane (103) Borehole

Drawdown Curve of Step Test



Step Test Analysis



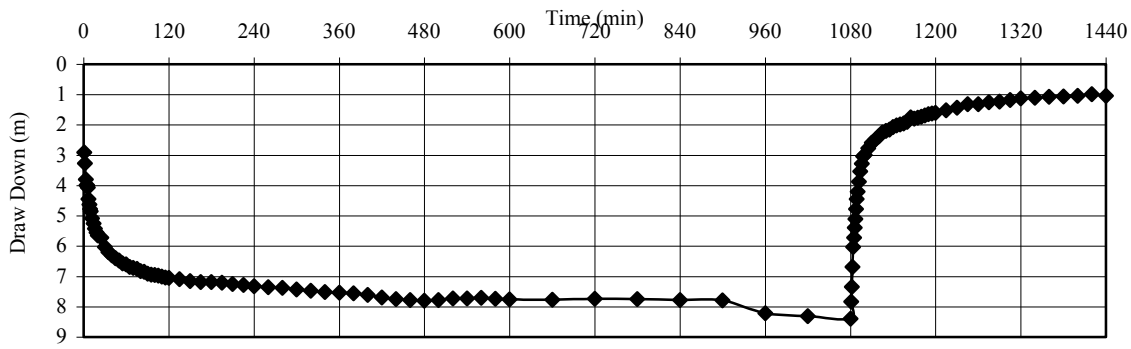
Critical Yield	6.8 m^3/h
Safe Yield	5.4 m^3/h

$s=BQ+CQ^2$

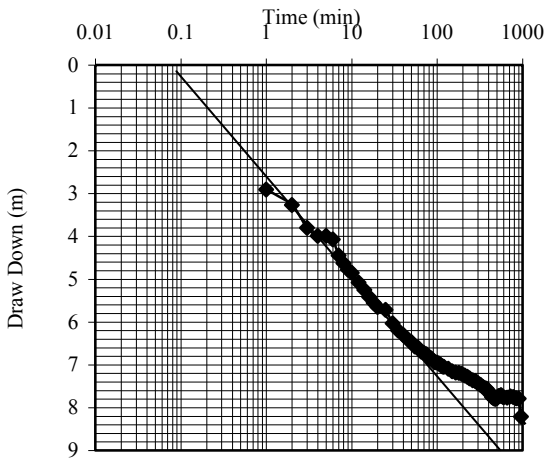
B= 0.7129

C= 0.0846

Drawdown Curve of Constant Rate & Recovery Test

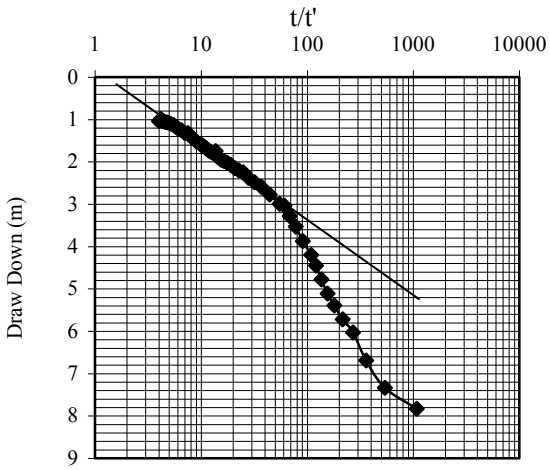


Constant Rate Test Analysis



Q:	5.45 m^3/h
Δs	2.23 m
t0	0.07 min
Transmissivity =	0.4466 m^2/h
Storage Coefficient =	0.1172

Recovery Test Analysis



Q:	5.45 m^3/h
Δs	1.9 m
Transmissivity =	0.5344 m^2/h

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PHYSICAL/CHEMICAL WATER ANALYSIS REPORT

Sample No. 35/011 **Date of Sampling:** 4/4/011

Source KAKWENE B/H **Date received:** 6/4/011

Purpose of sampling DOMESTIC **Submitted by:** JICA

Address: NAKURU

PARAMETERS	UNIT	RESULTS	REMARKS
pH	pH Scale	**7.86**	
Turbidity	N.T.U	**8.1**	
Permanganate value (20 min boiling)	mgO_2/l	**3.16**	
Conductivity	µS/cm	**570.0**	
Iron	mgFe/l	**0.6**	
Manganese	mgMn/l	0.1	
Arsenic	mgAs/l	**NIL**	
Calcium	mgCa/l	**44.0**	
Magnesium	mgMg/l	**32.6**	
Total Hardness	$mgCaCO_3/l$	**180.0**	
Total Alkalinity	$mgCaCO_3/l$	**186.0**	
Bicarbonate	$MgHCO_3/l$	**227.0**	
Chloride	mgCl/l	**12.0**	
Fluoride	mgF/l	**0.72**	
Nitrite	mgN/l	**0.011**	
Nitrate	mgN/l	**0.1**	
Ammonia	mgN/l	**0.18**	
Sulphate	$mgSO_4/l$	**14.0**	
Orthophosphate	mgP/l	**0.8**	
Total Suspended Solids	mg/l	**4.0**	
Free Carbon Dioxide	$mgCO_2/l$	**70.0**	
Total Dissolved Solids	mg/l	**270.0**	
Chlorine Concentration	mgCl/l	**NIL**	
Zinc	mgZn/l	**0.16**	
Copper	mgCu/l	**NIL**	
Chromium	mgCr/l	**0.0**	
Aluminium	mgAl/l	**NIL**	

COMMENTS: **Good source of water but with slightly high Iron, and Turbidity level. Aeration will be the possible treatment to achieve the acceptable level.**

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Borehole Drilling Log

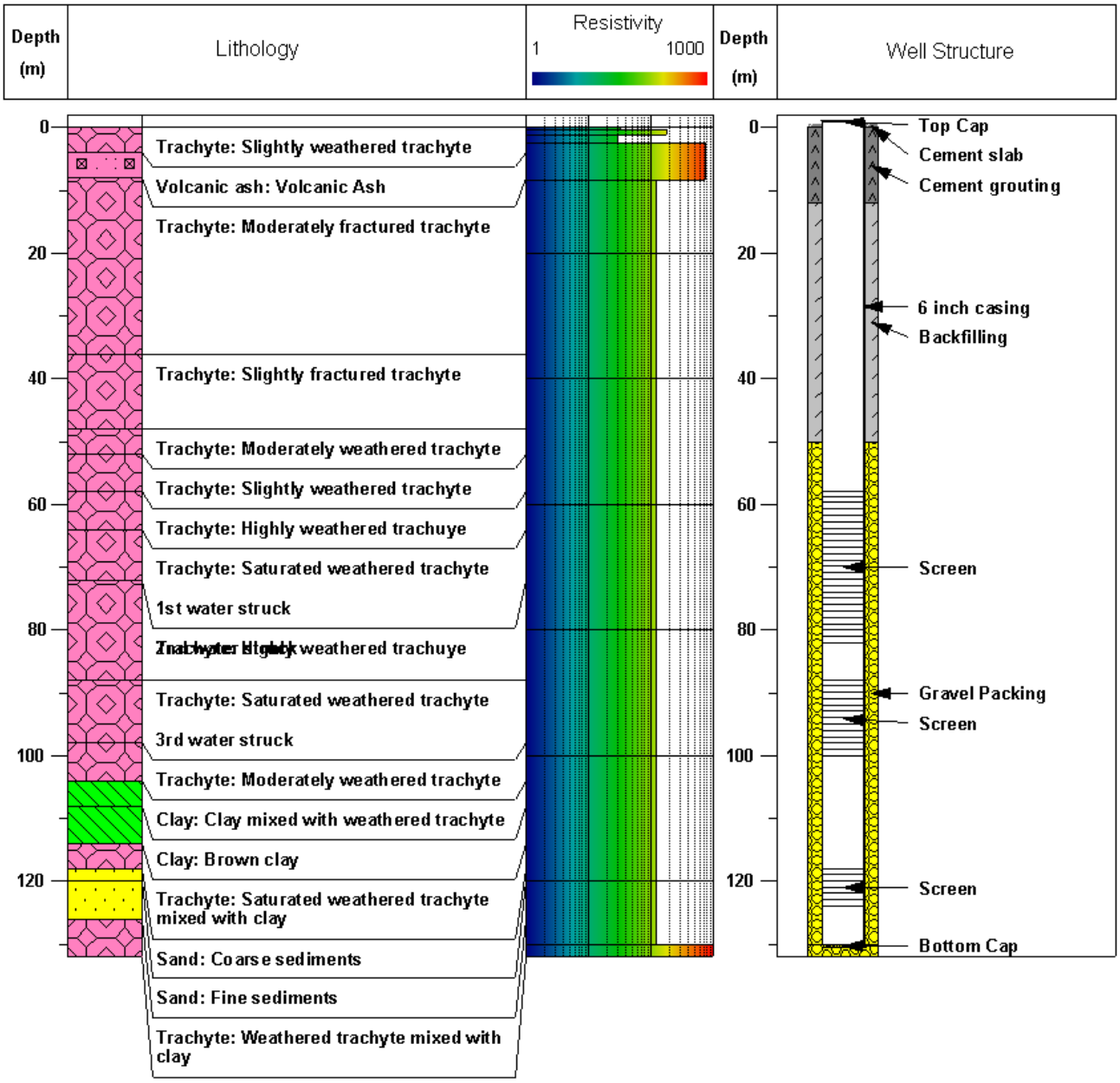
Site No.: **110** Site Name: **Kapsikoryan**

District: Baringo Division: Salawa Location: Kiboino Drillied Depth: 132 m

Latitude: 0 ° 29 ' 22.58 " N Static Water Level: 56.8 m

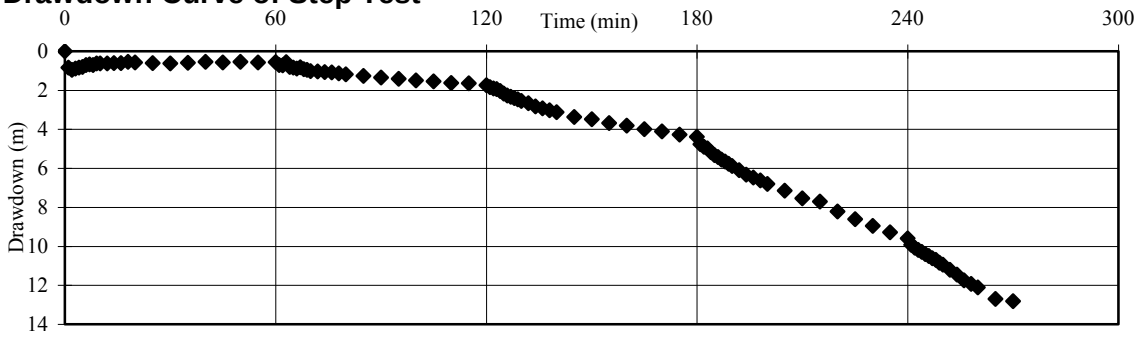
Longitude: 35 ° 42 ' 24.03 " E Altitude: 1681 m Pumping Rate: 4.16 m3/hour

UTM 36N X: 801287 m Y: 54177 m (Datum: Arc60) Dynamic Water Level: 69.33 m

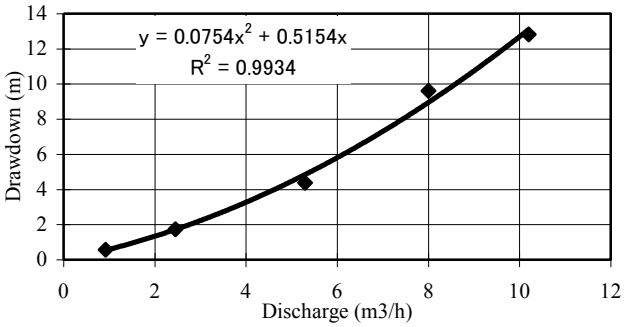


Pumping Test Analysis for Kapsikoryan (110) Borehole

Drawdown Curve of Step Test



Step Test Analysis



Critical Yield: 5.20 m^3/h

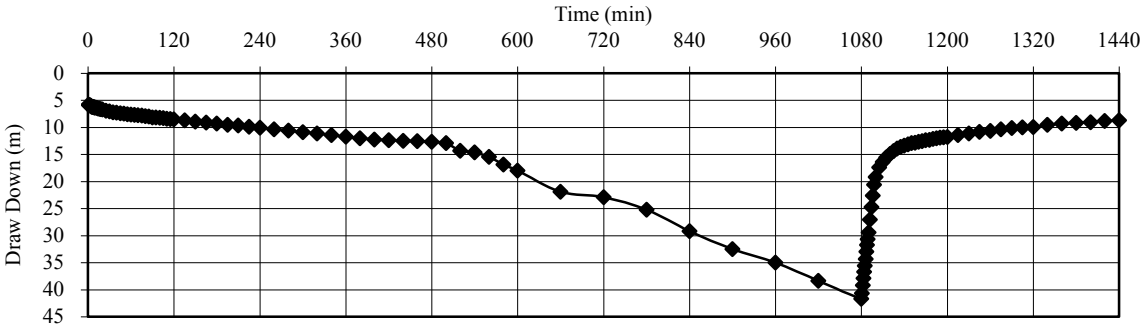
Safe Yield: 4.16 m^3/h

$s=BQ+CQ^2$

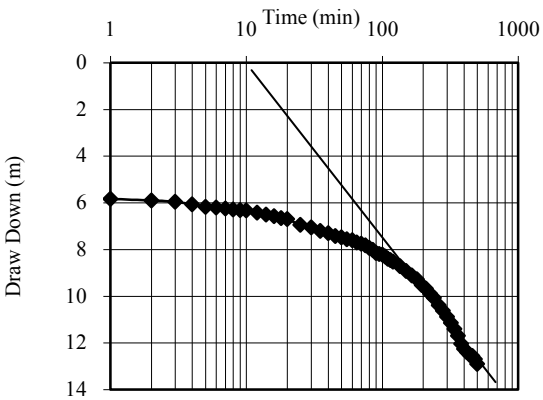
B= 0.515

C= 0.0754

Drawdown Curve of Constant Rate & Recovery Test



Constant Rate Test Analysis



Q: 3.6 m^3/h

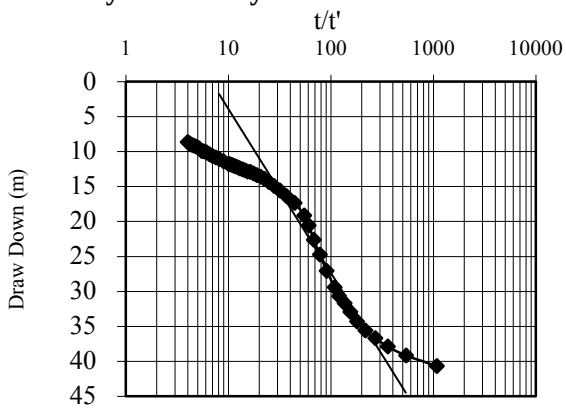
Δs 7.5 m

t_0 9 min

Transmissivity = 0.0879 m^2/h

Storage Coefficient = 2.9651

Recovery Test Analysis



Q: 3.6 m^3/h

Δs 21.25 m

Transmissivity = 0.0310 m^2/h

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PHYSICAL/CHEMICAL WATER ANALYSIS REPORT

Sample No. 28/011 **Date of Sampling:** 22/3/011

Source KAPSIKORYAN B/H **Date received:** 23/3/011

Purpose of sampling DOMESTIC **Submitted by:** WQ

Address: NAKURU

PARAMETERS	UNIT	RESULTS	REMARKS
pH	pH Scale	**7.95**	
Turbidity	N.T.U	**9.63**	
Permanganate value (20 min boiling)	mgO_2/l	**3.16**	
Conductivity	µS/cm	**260.0**	
Iron	mgFe/l	**0.42**	
Manganese	mgMn/l	0.9	
Arsenic	mgAs/l	**NIL**	
Calcium	mgCa/l	**22.4**	
Magnesium	mgMg/l	**0.4**	
Total Hardness	$mgCaCO_3/l$	**54.0**	
Total Alkalinity	$mgCaCO_3/l$	**86.0**	
Bicarbonate	$MgHCO_3/l$	**104.9**	
Chloride	mgCl/l	**17.0**	
Fluoride	mgF/l	**0.47**	
Nitrite	mgN/l	**0.008**	
Nitrate	mgN/l	**0.0**	
Ammonia	mgN/l	**0.11**	
Sulphate	$mgSO_4/l$	**NIL**	
Orthophosphate	mgP/l	**0.52**	
Total Suspended Solids	mg/l	**2.0**	
Free Carbon Dioxide	$mgCO_2/l$	**50.0**	
Total Dissolved Solids	mg/l	**130.0**	
Chlorine Concentration	mgCl/l	**NIL**	
Zinc	mgZn/l	**0.53**	
Copper	mgCu/l	**0.05**	
Chromium	mgCr/l	**0.0**	
Aluminium	mgAl/l	**NIL**	

COMMENTS: **Good source of water but with slightly high Iron, Manganese and Turbidity level. Aeration will be the possible treatment to achieve the acceptable level.**

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Borehole Drilling Log

Site No.: **131** Site Name: **Kabasis**

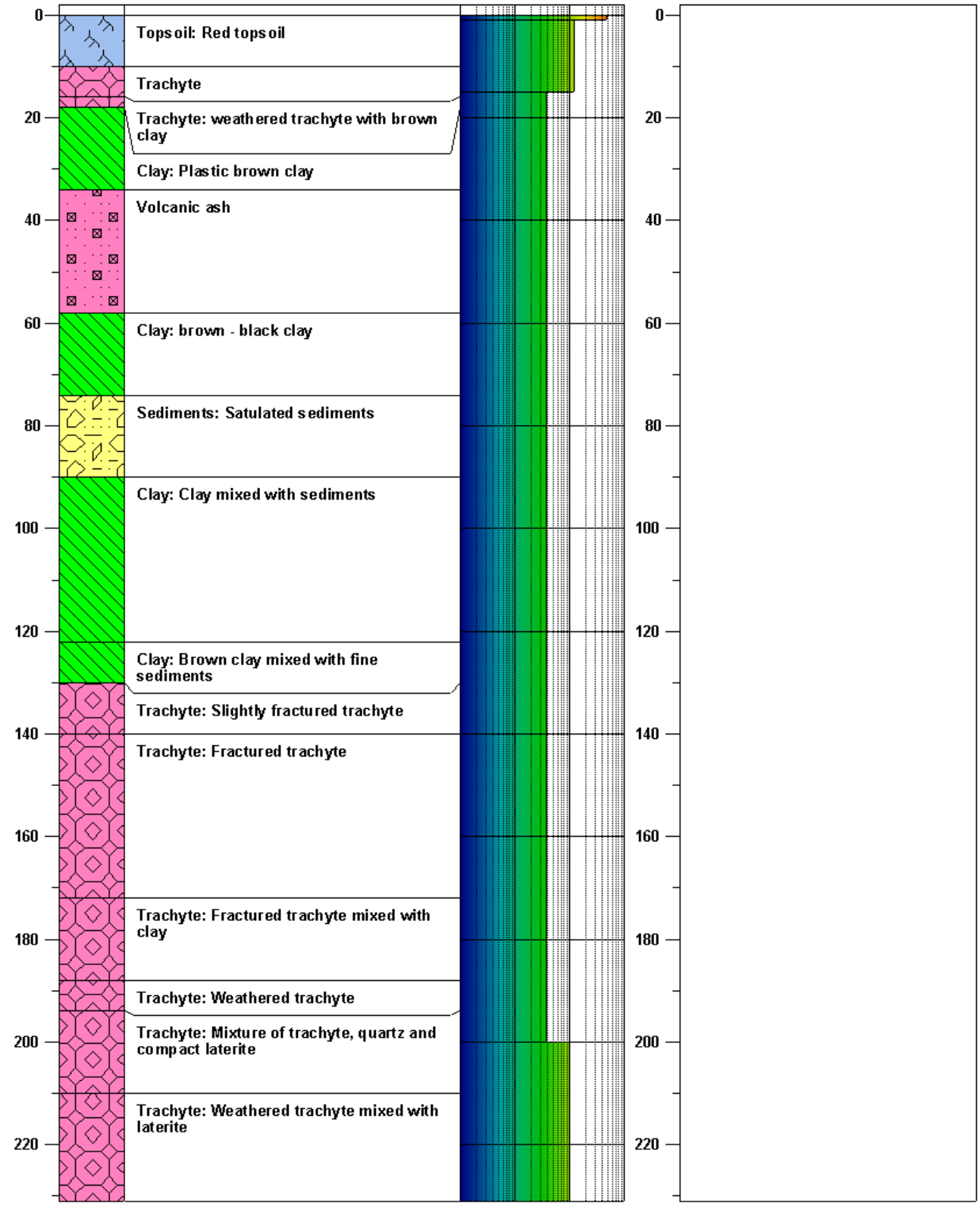
District: Baringo Division: Sacho Location: Kabasis Drillied Depth: 231 m

Latitude: 0 ° 26 ' 32.1 " N Static Water Level: - m

Longitude: 35 ° 47 ' 9.05 " E Altitude: 2116 m Pumping Rate: - m3/hour

UTM 36N X: 810109 m Y: 48940 m (Datum: Arc60) Dynamic Water Level: - m

Depth (m)	Lithology	Resistivity 1 – 1000	Depth (m)	Well Structure



Borehole Drilling Log

Site No.: **137** Site Name: **Kapkawa**

District: Baringo Division: Kabarnet Location: Ewalel

Latitude: 0 ° 34 ' 14.18 " N

Longitude: 35 ° 46 ' 50.44 " E Altitude: 2142 m

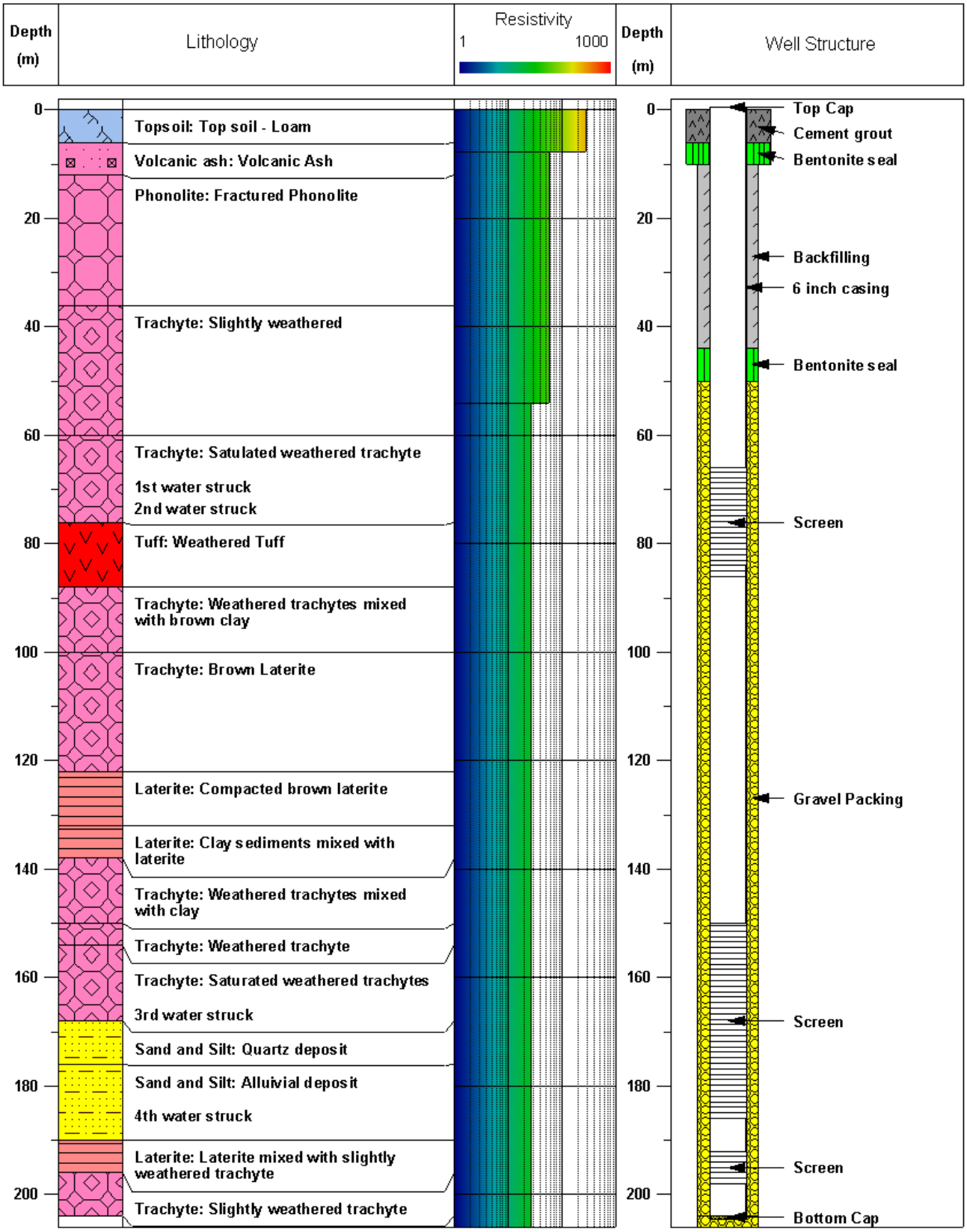
UTM 36N X: 809527 m Y: 63144 m (Datum: Arc60)

Drillied Depth: 204.0 m

Static Water Level: 47.9 m

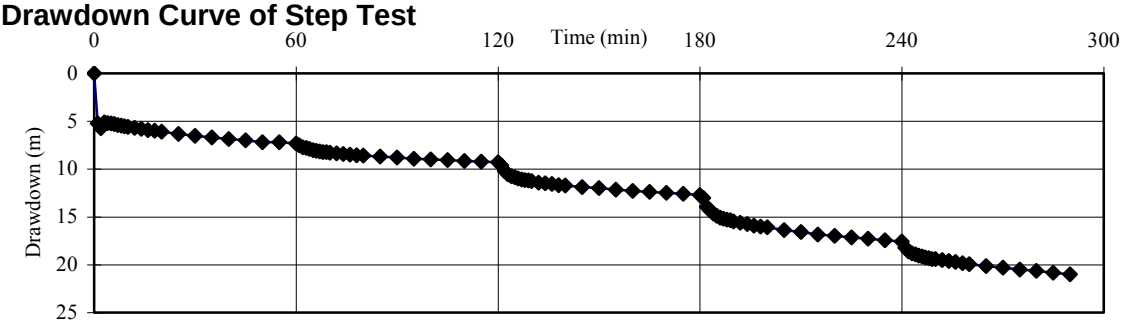
Pumping Rate: 70.66 m3/hour

Dynamic Water Level: 19.39 m

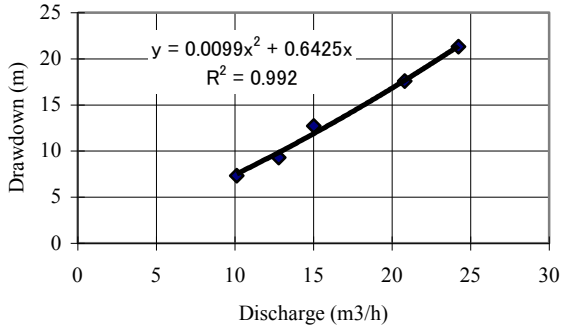


Pumping Test Analysis for Kapkawa (137) Borehole

Drawdown Curve of Step Test



Step Test Analysis

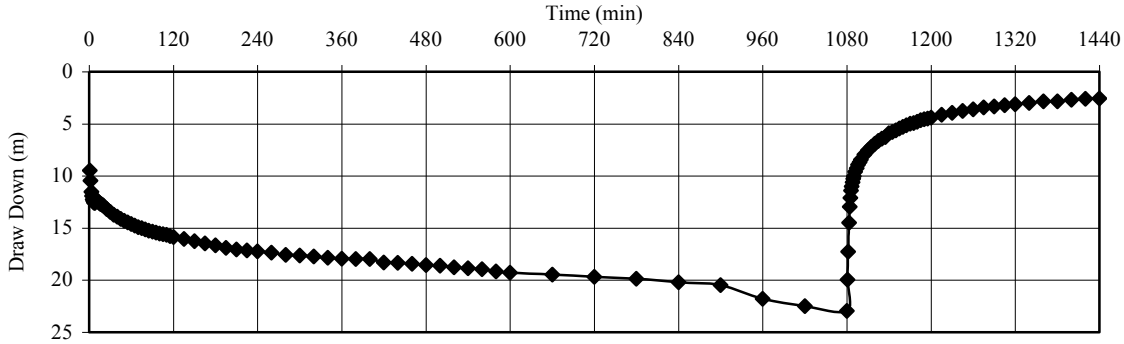


Critical Yield	24.2 m^3/h
Safe Yield	19.4 m^3/h

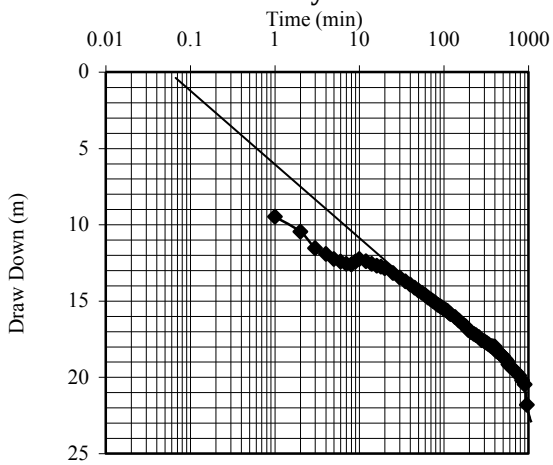
$s=BQ+CQ^2$

B=	0.6425
C=	0.0099

Drawdown Curve of Constant Rate & Recovery Test

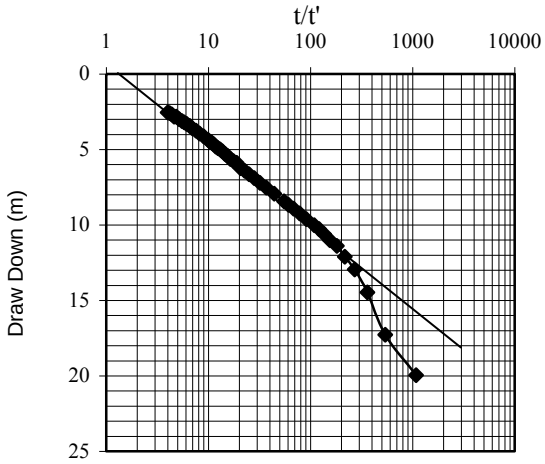


Constant Rate Test Analysis



Q:	20.2 m^3/h
Δs	4.8 m
t0	0.05 min
Transmissivity =	0.7756 m^2/h
Storage Coefficient =	0.1454

Recovery Test Analysis



Q:	20.2 m^3/h
Δs	5.5 m
Transmissivity =	0.6722 m^2/h

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PHYSICAL/CHEMICAL WATER ANALYSIS REPORT

Sample No. 34/011 **Date of Sampling:** 3/4/011

Source KAPKAWA B/H **Date received:** 6/4/011

Purpose of sampling DOMESTIC **Submitted by:** JICA

Address: NAKURU

PARAMETERS	UNIT	RESULTS	REMARKS
pH	pH Scale	**7.95**	
Turbidity	N.T.U	**10.2**	
Permanganate value (20 min boiling)	mgO_2/l	**3.16**	
Conductivity	µS/cm	**200.0**	
Iron	mgFe/l	**0.74**	
Manganese	mgMn/l	0.0	
Arsenic	mgAs/l	**NIL**	
Calcium	mgCa/l	**12.8**	
Magnesium	mgMg/l	**6.5**	
Total Hardness	$mgCaCO_3/l$	**40.0**	
Total Alkalinity	$mgCaCO_3/l$	**66.0**	
Bicarbonate	$MgHCO_3/l$	**80.5**	
Chloride	mgCl/l	**10.0**	
Fluoride	mgF/l	**0.0**	
Nitrite	mgN/l	**0.007**	
Nitrate	mgN/l	**0.1**	
Ammonia	mgN/l	**0.15**	
Sulphate	$mgSO_4/l$	**6.0**	
Orthophosphate	mgP/l	**1.46**	
Total Suspended Solids	mg/l	**4.0**	
Free Carbon Dioxide	$mgCO_2/l$	**50.0**	
Total Dissolved Solids	mg/l	**100.0**	
Chlorine Concentration	mgCl/l	**NIL**	
Zinc	mgZn/l	**1.75**	
Copper	mgCu/l	**0.05**	
Chromium	mgCr/l	**0.0**	
Aluminium	mgAl/l	**NIL**	

COMMENTS; **Good source of water but with slightly high Iron, and turbidity level. Aeration will be the possible treatment to achieve the acceptable level.**

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Borehole Drilling Log

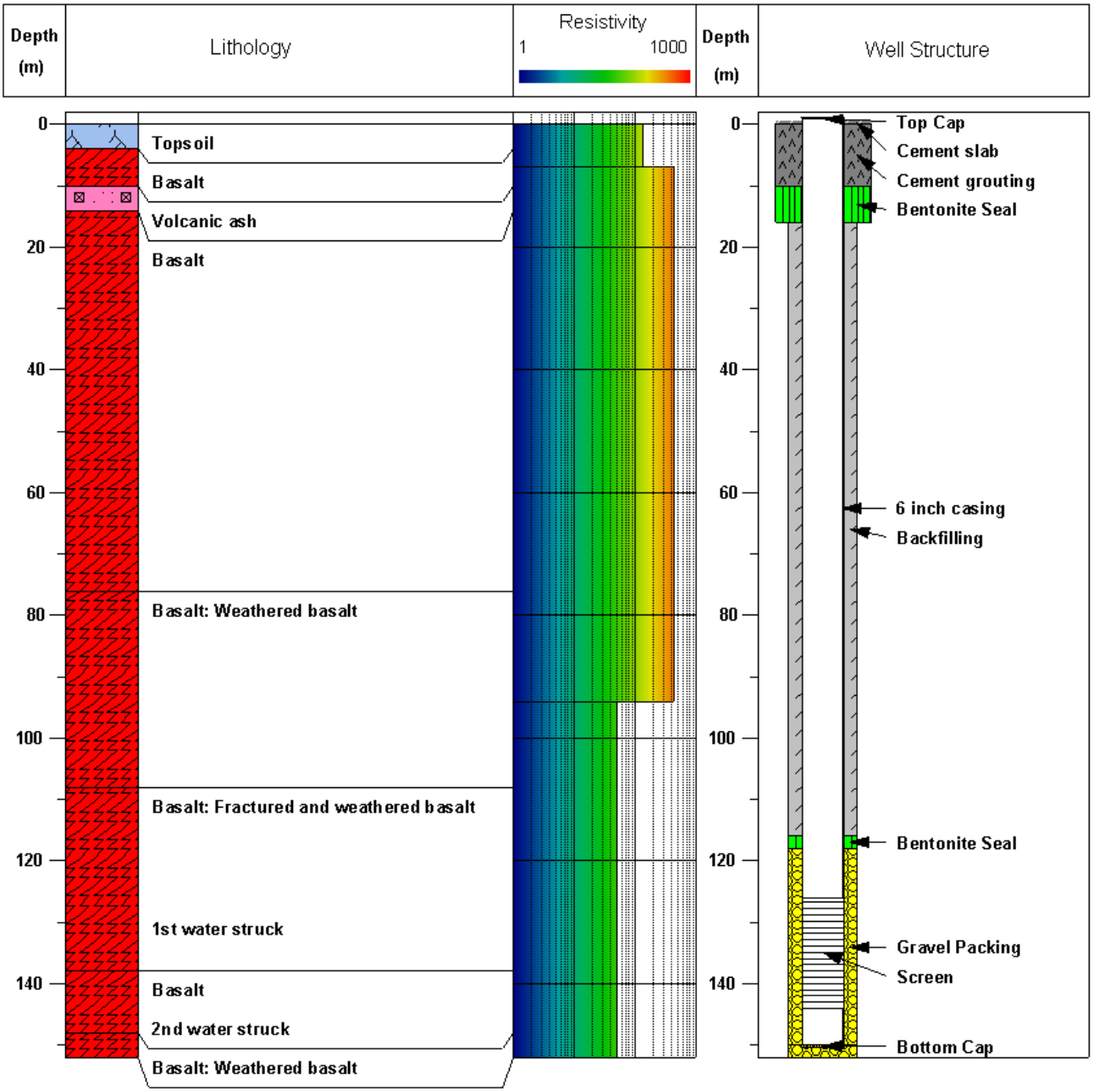
Site No.: **155** Site Name: **Naudo**

District: East Pokot Division: Mondi Location: Naudo Drillied Depth: 154 m

Latitude: 1 ° 1 ' 54.53 " N Static Water Level: 112.3 m

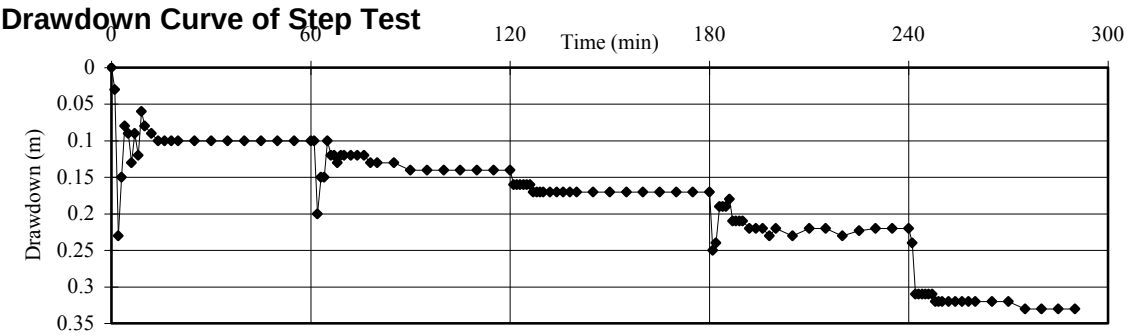
Longitude: 36 ° 13 ' 5.66 " E Altitude: 879 m Pumping Rate: 7.4 m3/hour

UTM 37N X: 190387 m Y: 114182 m (Datum: Arc60) Dynamic Water Level: 112.6 m

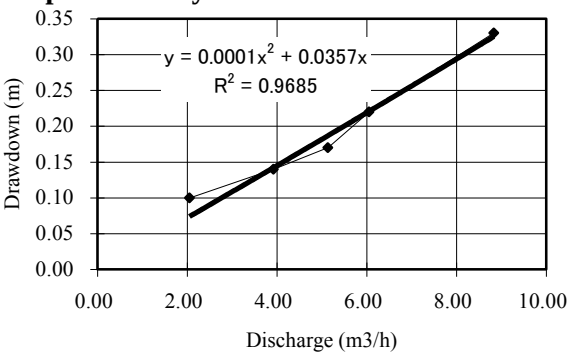


Pumping Test Analysis for Naudo (155) Borehole

Drawdown Curve of Step Test



Step Test Analysis



Critical Yield 8.83 m^3/h

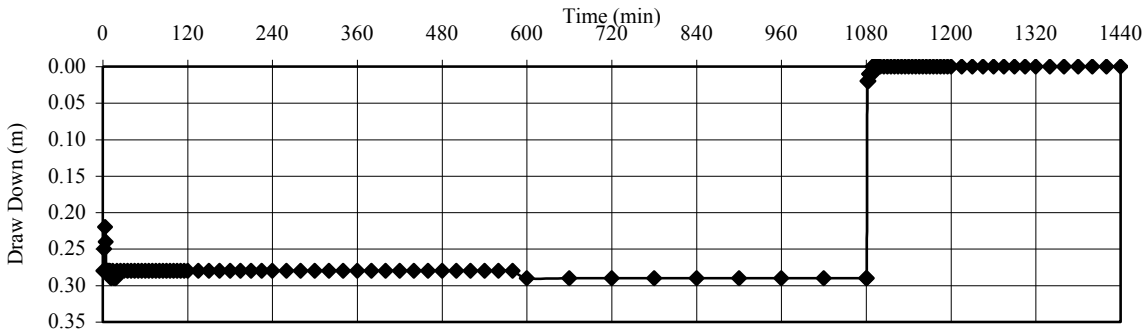
Safe Yield 7.064 m^3/h

$s=BQ+CQ^2$

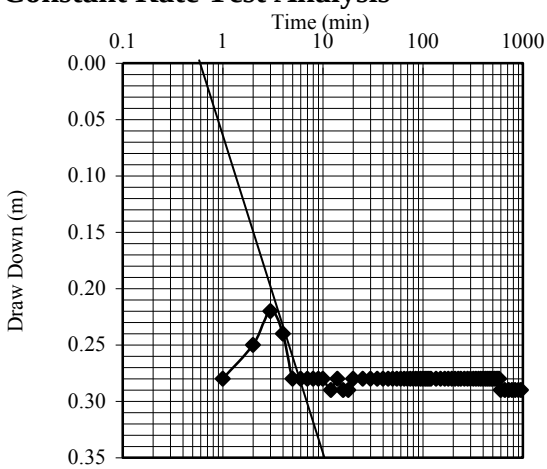
B= 0.0357

C= 0.0001

Drawdown Curve of Constant Rate & Recovery Test



Constant Rate Test Analysis



Q: 5.45 m^3/h

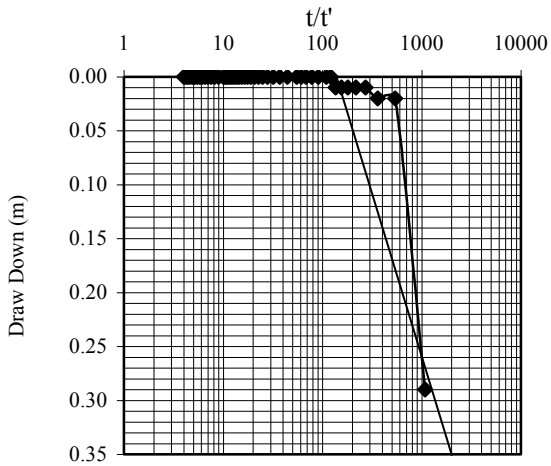
Δs 0.24 m

t0 0.4 min

Transmissivity = 4.156265 m^2/h

Storage Coefficient = 6.234398

Recovery Test Analysis



Q: 5.45 m^3/h

Δs 0.3 m

Transmissivity = 2.933834 m^2/h

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PHYSICAL/CHEMICAL WATER ANALYSIS REPORT

Sample No. 48/011 **Date of Sampling:** 11/4/011

Source NAUDO B/H143M **Date received:** 19/4/011

Purpose of sampling DOMESTIC **Submitted by:** JIKA

Address: MARIGATI

PARAMETERS	UNIT	RESULTS	REMARKS
pH	pH Scale	8.05	
Turbidity	N.T.U	3.12	
Permanganate value (20 min boiling)	mgO_2/l	3.16	
Conductivity	µS/cm	1560.0	
Iron	mgFe/l	0.12	
Manganese	mgMn/l	0.1	
Arsenic	mgAs/l	0.04	
Calcium	mgCa/l	11.2	
Magnesium	mgMg/l	5.9	
Total Hardness	$mgCaCO_3/l$	36.0	
Total Alkalinity	$mgCaCO_3/l$	424.0	
Bicarbonate	$MgHCO_3/l$	517.3	
Chloride	mgCl/l	186.0	
Fluoride	mgF/l	2.13	
Nitrite	mgN/l	0.0	
Nitrate	mgN/l	7.5	
Ammonia	mgN/l	0.07	
Sulphate	$mgSO_4/l$	18.0	
Orthophosphate	mgP/l	0.27	
Total Suspended Solids	mg/l	107.0	
Free Carbon Dioxide	$mgCO_2/l$	4.0	
Total Dissolved Solids	mg/l	780.0	
Chlorine Concentration	mgCl/l	NIL	
Zinc	mgZn/l		
Copper	mgCu/l	NIL	
Chromium	mgCr/l	NIL	
Aluminium	mgAl/l	NIL	

COMMENTS; **Good source of water but with slightly high fluoride.**

BANCY CHEGE
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Borehole Drilling Log

Site No.: **153** Site Name: **Chebilat**

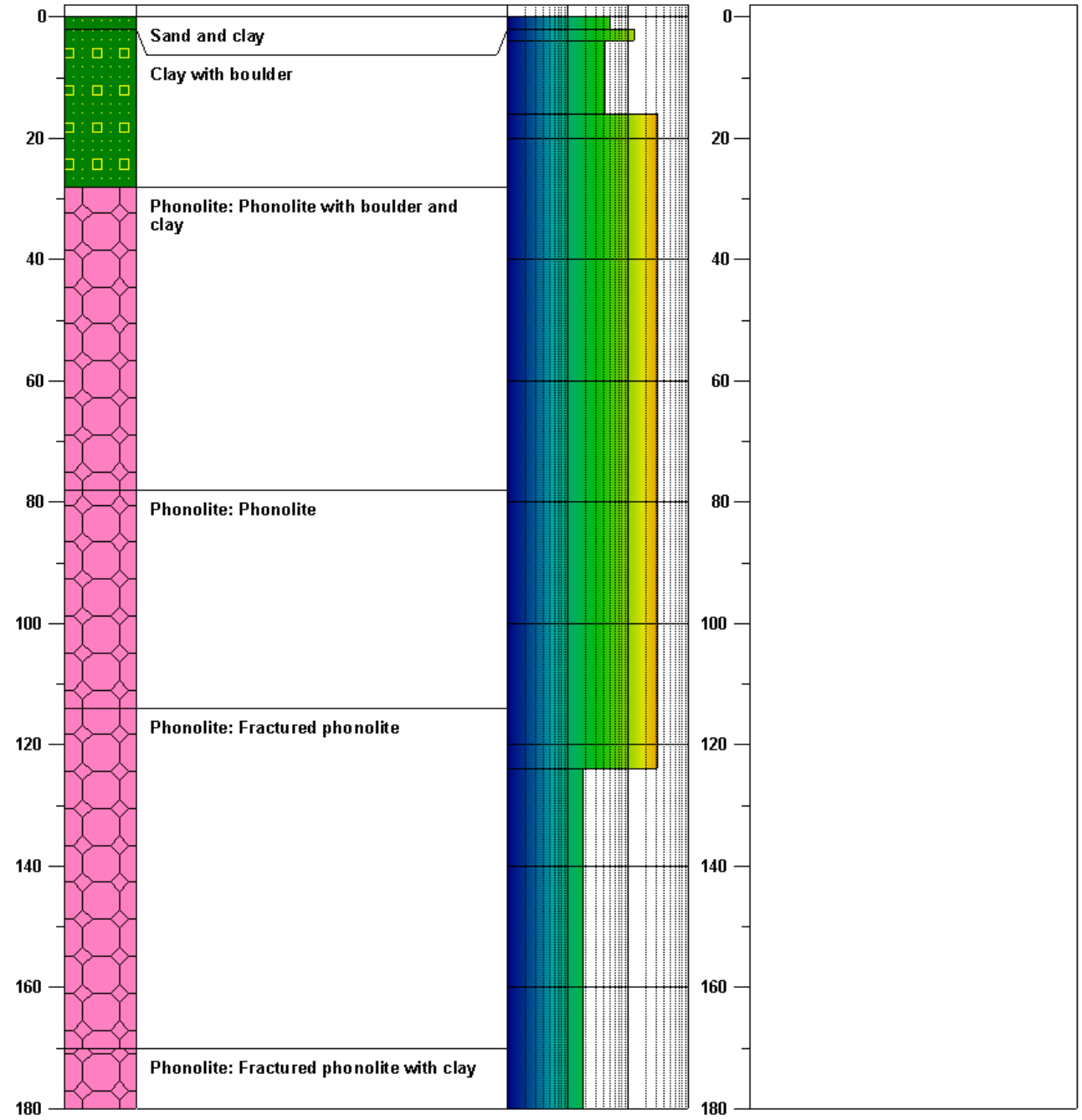
District: East Pokot Division: Mondi Location: Loruk Drillied Depth: 180 m

Latitude: 0 ° 44 ' 58.59 " N Static Water Level: - m

Longitude: 36 ° 2 ' 4.14 " E Altitude: 1126 m Pumping Rate: - m3/hour

UTM 37N X: 169892 m Y: 82966 m (Datum: Arc60) Dynamic Water Level: - m

Depth (m)	Lithology	Resistivity 1 – 1000	Depth (m)	Well Structure



Borehole Drilling Log

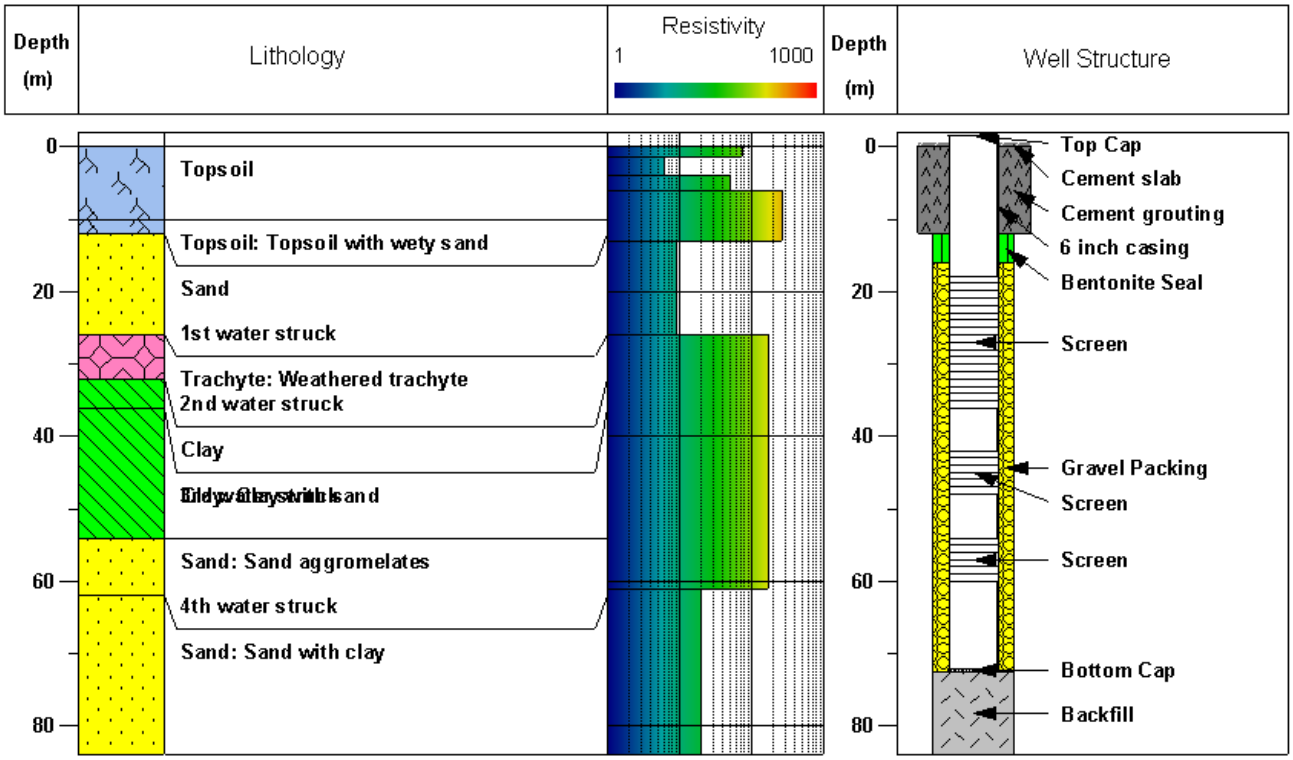
Site No.: **185** Site Name: **Chesakam**

District: East Pokot Division: Nginyany Location: Ribko Drillied Depth: 84 m

Latitude: 1 ° 1 ' 58.21 " N Static Water Level: 10.55 m

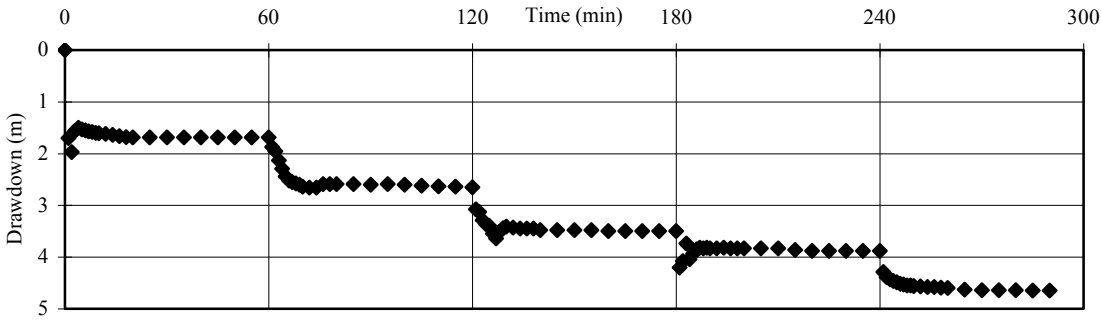
Longitude: 36 ° 1 ' 52.24 " E Altitude: 810 m Pumping Rate: 23.8 m3/hour

UTM 37N X: 169549 m Y: 114314 m (Datum: Arc60) Dynamic Water Level: 14.66 m

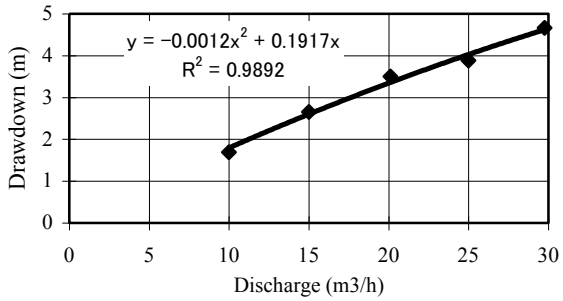


Pumping Test Analysis for Chesakam (185) Borehole

Drawdown Curve of Step Test



Step Test Analysis



Critical Yield 29.8 m^3/h

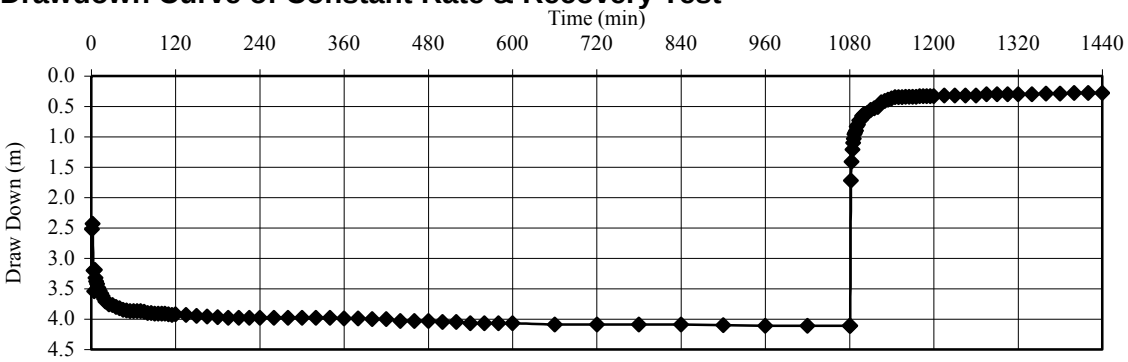
Safe Yield 23.8 m^3/h

$s=BQ+CQ^2$

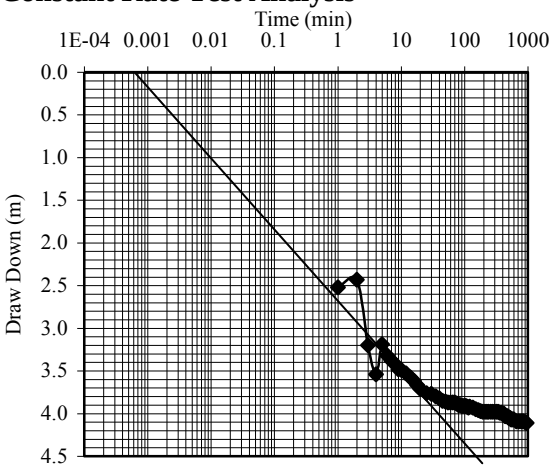
B= 0.1917

C= 0.0012

Drawdown Curve of Constant Rate & Recovery Test



Constant Rate Test Analysis



Q: 24 m^3/h

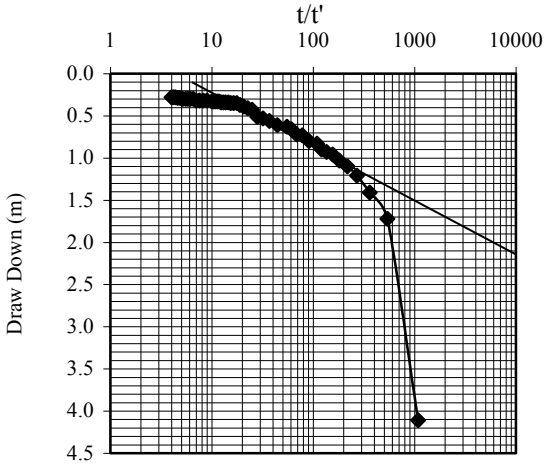
Δs 0.825 m

t0 0.0005 min

Transmissivity = 5.324456 m^2/h

Storage Coefficient = 0.009983

Recovery Test Analysis



Q: 24 m^3/h

Δs 0.7 m

Transmissivity = 6.507669 m^2/h

RIFT VALLEY WATER SERVICES BOARD

Telephone : (051) 2213557

MAJI PLAZA
PRISONS ROAD ROAD
P.O. Box 2451
NAKURU

PHYSICAL/CHEMICAL WATER ANALYSIS REPORT

Sample No. 39/011 **Date of Sampling:** 8/4/011

Source CHESAKAM B/H **Date received:** 11/4/011

Purpose of sampling DOMESTIC **Submitted by:** JICA

Address: NAKURU

PARAMETERS	UNIT	RESULTS	REMARKS
pH	pH Scale	7.8	
Turbidity	N.T.U	0.42	
Permanganate value (20 min boiling)	mgO_2/l	3.16	
Conductivity	µS/cm	720.0	
Iron	mgFe/l	0.06	
Manganese	mgMn/l	0.2	
Arsenic	mgAs/l	NIL	
Calcium	mgCa/l	25.6	
Magnesium	mgMg/l	12.6	
Total Hardness	$mgCaCO_3/l$	78.0	
Total Alkalinity	$mgCaCO_3/l$	266.0	
Bicarbonate	$MgHCO_3/l$	324.0	
Chloride	mgCl/l	20.0	
Fluoride	mgF/l	2.2	
Nitrite	mgN/l	0.01	
Nitrate	mgN/l	0.1	
Ammonia	mgN/l	0.08	
Sulphate	$mgSO_4/l$	22.0	
Orthophosphate	mgP/l	0.65	
Total Suspended Solids	mg/l	12.0	
Free Carbon Dioxide	$mgCO_2/l$	28.0	
Total Dissolved Solids	mg/l	360.0	
Chlorine Concentration	mgCl/l	nil	
Zinc	mgZn/l	0.0	
Copper	mgCu/l	0.02	
Chromium	mgCr/l	nil	
Aluminium	mgAl/l	0.01	

COMMENTS; Good source of water but with slightly high fluoride.

BANCY CHEGE
Oi/C REGIONAL WATER TESTING LABORATORY

MINUTES OF DISCUSSIONS ON THE SECOND PREPARATORY SURVEY ON THE PROJECT FOR RURAL WATER SUPPLY IN BARINGO COUNTY IN THE REPUBLIC OF KENYA (EXPLANATION ON DRAFT REPORT)

In September 2011, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Preparatory Survey Teams on the Project for Rural Water Supply in Baringo County (hereinafter referred to as "the Project") to the Government of the Republic of Kenya (hereinafter referred to as "Kenya") and through discussion, field survey and technical evaluation of the results in Japan, JICA prepared a draft report of the study.

In order to explain and consult with the Government of Kenya on the components of the draft report, JICA sent to Kenya the Draft Report Explanation Team (hereinafter referred to as "the Team"), which was headed by Mr.Toshio MURAKAMI, Kenya Office, JICA, from 26th to 30th September 2011.

As a result of discussions, both sides confirmed the main items described in the attached sheets.

Nairobi, September 29th, 2011

Mr. Toshio MURAKAMI
Leader
Second Preparatory Survey Team
Japan International Cooperation Agency

Eng. David Stower,CBS,OGW
Permanent Secretary
Ministry of Water and Irrigation
The Republic of Kenya

for Eng. Japheth Mutai
Chief Executive Officer
Rift Valley Water Services Board
The Republic of Kenya

ATTACHMENT

1. Component of the Draft Report

The Kenyan side agreed and accepted in principle the components of the Draft Outline Design Report explained by the Team. The project sites are shown in Annex-1.

2. Japan's Grant Aid Scheme

The Kenyan side understood the Japan's Grant Aid Scheme and the necessary measures to be taken by The Kenyan side as explained by the Team and described in Annex-4 and 5.

3. Responsible and Implementing Organization

The responsible and implementing organization are as follows;

- The Responsible Agency is the Ministry of Water and Irrigation (hereinafter referred to as "MoWI").
- The Implementing Agency is the Rift Valley Water Services Board (hereinafter referred to as "RV-WSB").

However, the direction on the Water Sector will be guided by the new Constitution after August 2012, so the Kenyan side explained that water sector is undergoing the process of realignment to the new dispensation according to the new Constitution. The realignment does not adversary affect implementation process of the Project.

In addition, both sides agreed that the Kenyan side should continuously provide information regarding the direction of the Water sector in order to guide the implementation of the Project.

4. Schedule of the Survey

JICA will complete the final report in accordance with the confirmed items and send it to Kenya by December 2011.

5. Other Relevant Issues

5-1. Tittle of the Project

Both sides agreed that the tittle of the Project will be changed to "the Project for Rural Water Supply in Baringo County". According to the new Kenyan Constitution, Kenya will do away with the regional/provincial structures of administration and will instead provide two levels of governance, national government and county governments in August 2012. Therefore, administrative area of the tittle should be consistent with constitutional reform.

5-2. Components of the Project

Both sides agreed on the components of the Project as follows;

(1) Construction of Water Supply Facility

No.	Item		Quantity
1	Point-source system with submersible pump	borehole, pumping system, elevated water tank, transmission pipes, water kiosk, cattle trough and fence	90 Sets

(2) Procurement of Equipment

No.	Item		Quantity
1	Vehicle	4WD, Pickup, Double cabin	1 Set
2	Motorbikes	175cc	2 Sets
3	Computer	Desktop, Printer(A3)	1 Set

(3) Soft Component

Soft Component Program will be undertaken for operation and maintenance (O&M) of water supply facilities at district and community level.

5-3. Project Cost Estimate

The Team explained to the Kenyan side the Project cost estimate as described in Annex-6. The Kenyan side understood that the cost estimate was provisional and would be examined further by the Government of Japan for its approval as a Grant.

Furthermore, the Team explained to the Kenyan side to understand that the cost estimate should never be duplicated in any form nor disclosed to any other party(s) until the relevant contracts are awarded by the Ministry of Water and Irrigation. This confinement must be abided by for securing the fairness of tender procedure.

The Team also explained the estimated cost to be borne by the Kenyan side as shown in Annex-6. The Team requested the Kenyan side to secure necessary counterpart budget for the implementation of the Project, and Kenyan side accepted it.

5-4. Target sites and Alternative sites

The Team explained that the target sites are 90 sites in 77 Villages and alternative sites are 28 sites in 26 Villages for the Project shown in Annex-2. Alternative sites are reserved for the time when borehole fails in the target site. The Kenyan side understood it.

5-5. Construction of Borehole

Both sides agreed on the construction of borehole for the Project as follows;

(1) Borehole Construction Procedure

- During the outline design, 5 successful boreholes which were already secured will be utilized as production wells for the Project.
- During the detail design stage, 19 boreholes will be drilled in order to secure 10 production wells. Successful rate is estimated 56 %.
- During the construction stage, the remaining 75 production wells will be built.

The final number of production well, however, is subject to change according to the result of the detail design.

(2) Drilling Times per Site

Drilling times per site would be limited to twice. If the boreholes drilled twice will be negative in a certain target site, the site will be removed as the Project site, and the Project site will be changed to an alternative site.

(3) Criteria for Successful Boreholes

a) Water Yield

It will be determined by the discussion of both sides based on the result of the drilling and site condition such as groundwater potential, population and so on. However, it should be at least 1 m^3 per hour.

b) Water Quality

Water quality will be basically applied on the Kenyan water supply practice manual.

(4) Handling of Unsuccessful Boreholes

If the borehole is completely dry, it will be backfilled. However, in the case that the borehole does not meet the criteria stated above after the development of borehole and completion of pumping test and water quality analysis, such borehole is handled according to the table below;

Handling of Unsuccessful Boreholes

	Yield	Quality	Handling for Drilled Borehole
Unsuccessful	OK	OUT	It will be handed over to the Kenyan side on condition that the water will not be used for drinking directly without treatment.
	OUT	OK	It will be handed over.
	OUT (Completely dry)	-	It will be backfilled.

5-6. The Power Source of Water Supply Facility

The Team explained that the power source of water supply facility are as shown on the table below based on the result of the survey;

The Number and Type of Power source in each District

District	Target sites				Alternative sites			
	Solar	Grid	Generator	Total	Solar	Grid	Generator	Total
Baring North	12	14	2	28	4	4	1	9
Baringo	14	18	6	38	2	2	0	4
Marigat	9	5	0	14	4	1	3	8
East Pokot	8	0	2	10	4	1	2	7
Total	43	37	10	90	14	8	6	28

The final number of the power source of water supply facility, however, is subject to change according to the result of the detail design, and the Kenyan side agreed.

5-7. Distribution of Power Line

Commercial power supply is available in 37 target sites. So it is necessary for the Project to distribute commercial power line to the facilities.

The Team explained that under the Japan's grant aid scheme, in principle, distribution of power line to the facilities is undertaking by the recipient country. Therefore, the construction cost for distribution of power line is undertaking by the Kenyan side.

In addition, so as not to delay the construction process due to distribute power line, the Kenyan side shall coordinate early with the Kenya Power Company to ensure timely installation of distribution power line, and the Kenyan side agreed it.

5-8. Undertakings of The Kenyan side

The Team requested the Kenyan side, in addition to the major understandings described in Annex-5, to abide by undertakings listed below for the smooth implementation of the Project;

1) To secure lots of land (e.g. boreholes, water tanks, water kiosks, transmission pipes, pumping system, cattle troughs, warehouse and stockyards) necessary,
2) To provide necessary information and documents,
3) To make adequately coordination with related organizations and communities,
4) To obtain permission for drilling from the Water Resources Management Authority and to bear the necessary expenses,
5) To distribute power line to the facilities which used commercial power without delay,
6) To support organization of Water Users Association by communities,
7) To assign necessary number of counterpart personnel (C/Ps),
8) To bear the allowances and other expenses related to the activities for C/Ps,
9) To protect test boreholes which are to be used as production boreholes until the

commencement of the construction,

10) To carry out environmental impact assessment (EIA) for the Project, if necessary, and to obtain approval from the National Environment Management Authority before the Project commencement and to bear the necessary expenses.

11) To take timely necessary measures for operation and maintenance of water supply facilities after completion of the Project.

(END)

Annex:

Annex-1 Project Site

Annex-2 List of Target Site and Alternative Site

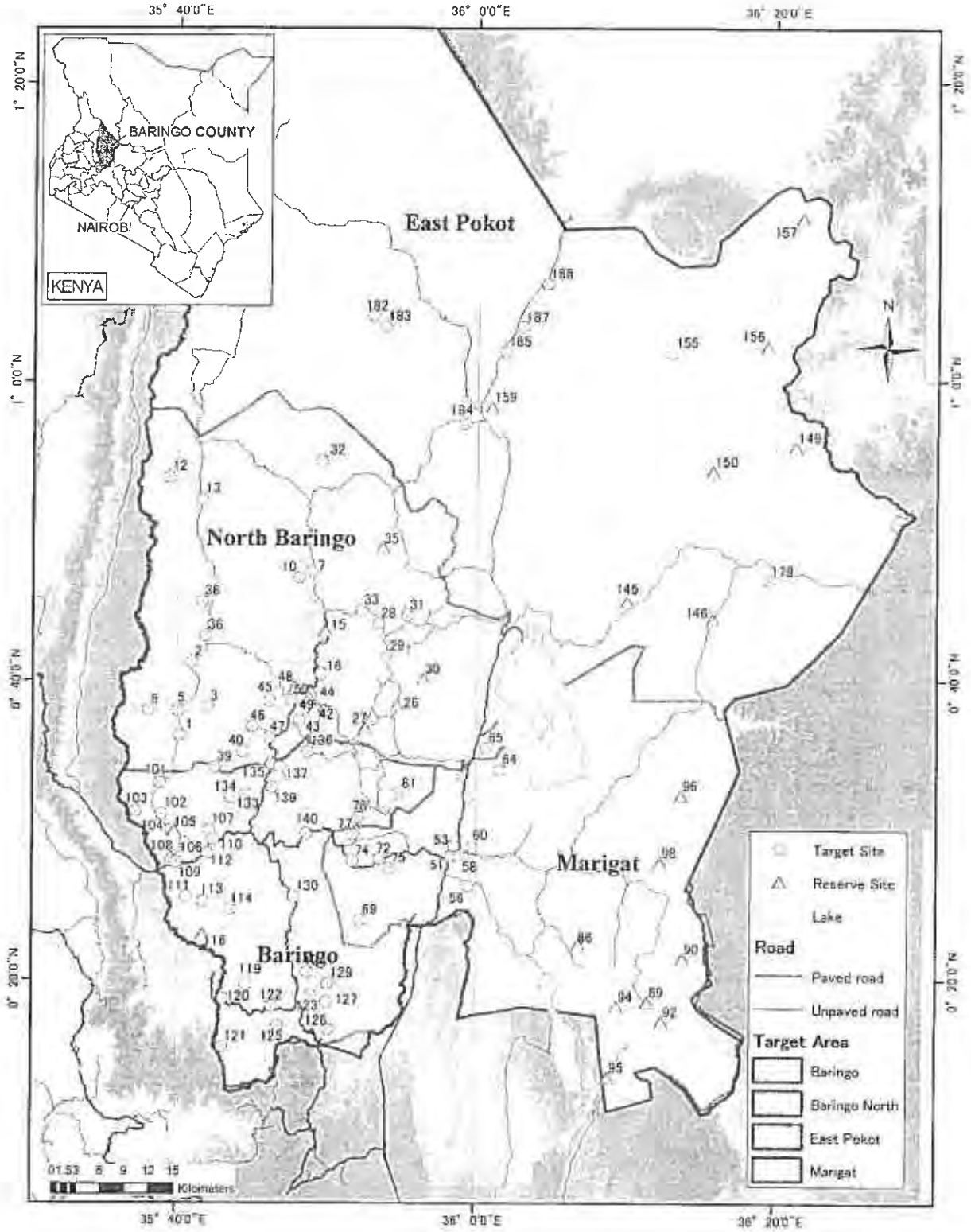
Annex-3 Organization Chart of the Implementation Agency

Annex-4 Japan's Grant Aid Scheme

Annex-5 Major Undertakings to be taken by Each Government

Annex-6 Project Cost Estimate

Project Site



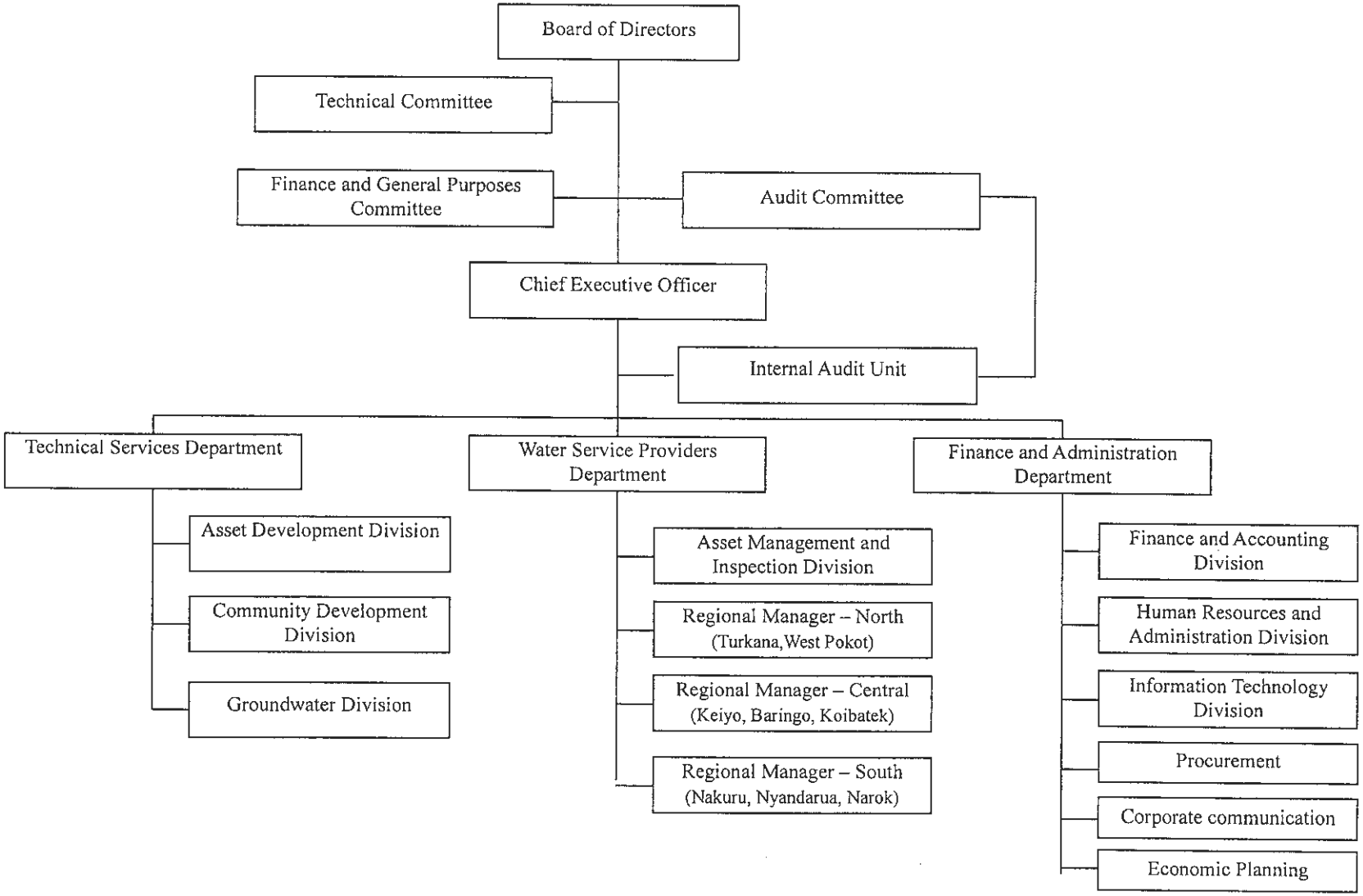
3-1. List of Target Sites

District	NO	Sites	Population 2015	Type of Power System	Remark
Baringo North	1	Katiborok	510	Commercial Grid	
(28)	2	Konoo	480	Commercial Grid	
	5	Kibuliak	760	Commercial Grid	
	13	Marigut	480	Commercial Grid	
	16	Kapkombe	1,070	Commercial Grid	Drilling by Detail Design
	36.1	Barwessa-1	580	Commercial Grid	
	40	Kapkirwok	1,250	Commercial Grid	Drilling by Detail Design
	43.1	Kaptere1	720	Commercial Grid	
	43.2	Kaptere2	680	Commercial Grid	
	46	Kaptum	1,230	Commercial Grid	Drilling by Detail Design
	47.1	Ossen Forest station1	750	Commercial Grid	
	47.2	Ossen Forest station2	810	Commercial Grid	
	49	Kureschun	1,600	Commercial Grid	Drilling by Detail Design
	50	Kipkokom	1,070	Commercial Grid	Drilling by Detail Design
	3	Kormor	350	Solar	
	6	Kapnarok	400	Solar	
	10	Moigutwo	420	Solar	
	12	Ayatia	380	Solar	
	28	Kolongotwo	450	Solar	
	29	Koibaware	430	Solar	
	31	Kipchemoi	370	Solar	
	32	Kapturo	530	Solar	
	33	Chepkesin	450	Solar	
	36.2	Barwessa-2	430	Solar	
	38	Likwon	640	Solar	
	39	Seremwo	430	Solar	
	7	Chemondoi	930	Generator	
	45	Tiriondonin	1,000	Generator	Drilling by Detail Design
Marigat	51	Kamagonge	960	Commercial Grid	
(14)	56	Kamimba	480	Commercial Grid	
	58	Catholic	430	Commercial Grid	
	72	Kimalel Hospital	400	Commercial Grid	
	74	Lokoiwopsonchun	400	Commercial Grid	
	53	Kapsamson	520	Solar	
	60	Ndambul	470	Solar	
	64	Longiron	520	Solar	
	65	Marti	530	Solar	
	69	Kapkechii	360	Solar	
	75	Kinyach	360	Solar	
	77	Tirng'ongwonin	370	Solar	
	78	Kibingor	480	Solar	
	81	Kabusa	640	Solar	
Baringo	101	Kaptara	640	Commercial Grid	
(38)	102	Kipsoit Primary	570	Commercial Grid	
	103.2	Kakwane	800	Commercial Grid	
	104.1	Salawa Hospital1	630	Commercial Grid	
	104.2	Salawa Hospital2	630	Commercial Grid	
	106	Eron Primary	750	Commercial Grid	
	109.1	Oinobmoi centre1	1,430	Commercial Grid	Drilling by Detail Design
	120.1	Mogorwa-1	410	Commercial Grid	

	121	Kisonei Primary	450	Commercial Grid	
	124.1	Tabarin1	740	Commercial Grid	
	125	Tuluongoi	980	Commercial Grid	
	130.1	Timboiywo1	680	Commercial Grid	
	130.2	Timboiywo2	750	Commercial Grid	
	133	Kapchomuswo Sec	590	Commercial Grid	
	135	Pemwai centre	460	Commercial Grid	
	136.1	Talai-1	1,590	Commercial Grid	Drilling by Detail Design
	140	Turupkir	390	Commercial Grid	
	137.1	Kapkawa-1	1,290	Commercial Grid	Drilled by Outline Design
	103.1	Kakwane	630	Solar	Drilled by Outline Design
	107	Kimoso	580	Solar	
	109.2	Oinobmoi centre2	560	Solar	
	111	Kurumbopsoo	850	Solar	
	112	Sironoi	530	Solar	
	113	Kasitet	860	Solar	
	114	Sichei	370	Solar	
	119	Chepkero Primary	480	Solar	
	120.2	Mogorwa-2	410	Solar	
	126	Tebei	880	Solar	
	127	Ilyakat	400	Solar	
	134	Kiwanja Ndege	490	Solar	
	137.2	Kapkawa-2	500	Solar	
	139	Serei	510	Solar	
	110	Kapsikoryan	960	Generator	Drilled by Outline Design
	122	Ochii Primary	690	Generator	
	123	Siginwo	1,050	Generator	Drilling by Detail Design
	124.2	Tabarin2	670	Generator	
	129	Tinomoi	940	Generator	
	136.2	Talai-2	1,390	Generator	Drilling by Detail Design
East Pokot	179	Lomerimeri	380	Solar	
(10)	182	Chepanda	430	Solar	
	183.1	Donge-1	580	Solar	
	184.1	Katukumwo1	670	Solar	
	184.2	Katukumwo2	670	Solar	
	185	Chesakam	560	Solar	Drilled by Outline Design
	186	Chesitet	440	Solar	
	187	Kasakaram	600	Solar	
	155	Naudo	750	Generator	Drilled by Outline Design
	183.2	Donge-2	850	Generator	
	Total	77 Villages 90 Sites	59,580	Solar☐43 Grid ☐37 Generator ☐10	

3-2. List of Alternative Sites

District	NO	Sites	Population 2015	Type of Power System	Remark
Marigat	90	Kapkechir	730	Generator	
(8)	92	Kipkandule	550	Generator	
	95	Nyalilbuch	760	Generator	
	98	Menmeno	610	Solar	
	86	Samuran	480	Solar	
	94	Sambaka	490	Solar	
	96	Sokonin	390	Solar	
	89	Mochongoi centre	450	Commercial Grid	
East Pokot	159	Cheptunoyo	390	Commercial Grid	
(7)	145	Nakolete	380	Solar	
	146	Kalapata	350	Solar	
	150	Katungura	530	Solar	
	149	Siria	370	Solar	
	156	Akwichatis	1,000	Generator	
	157	Nasorot	1,000	Generator	
Baringo North	44	Boin	430	Commercial Grid	
(9)	42.1	Kapchepkor1	660	Commercial Grid	
	42.2	Kapchepkor2	790	Commercial Grid	
	48	Kaptumin	1,280	Commercial Grid	
	35	Chemoe	480	Solar	
	26	Barkilach	430	Solar	
	27	Usuonin	380	Solar	
	30	Chepkewel	380	Solar	
	15	Kapamin	750	Generator	
Baringo	116	Katunoi	430	Solar	
(4)	108	Saonin	530	Solar	
	105.1	Salawa Primary1	970	Commercial Grid	
	105.2	Salawa Primary2	890	Commercial Grid	
	Total	26 Villages 28 Sites	16,880	Solar☐13 Grid ☐8 Generator ☐7	



Annex-3 Organization Chart of Rift Valley Water Services Board (RV-WSB)

Japan's Grant Aid Scheme

The Grant Aid Program provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. Grant Aid is not supplied through the donation of materials as such.

1. Grant Aid Procedure

1) Japan's Grant Aid Program is executed through the following procedures.

Application	(Request made by a recipient country)
Survey	(Outline Design Survey conducted by JICA)
Appraisal & Approval	(Appraisal by the Government of Japan and Approval by Cabinet)
Determination of Implementation	(The Notes exchanged between the Governments of Japan and the recipient country)

2) Firstly, the application or request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA to conduct a survey on the request. If necessary, JICA send a Preparatory Survey Team to the recipient country to confirm the contents of the request.

Secondly, JICA conducts the survey (Outline Design Survey), using Japanese consulting firms.

Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Programme, based on the Outline Design Survey report prepared by JICA, and the results are then submitted to the Cabinet for approval.

Fourthly, the project, once approved by the Cabinet, becomes official with the Exchange of Notes signed by the Governments of Japan and the recipient country.

Finally, for the implementation of the project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

2. Outline Design Survey

1) Contents of the Survey
The aim of the Outline Design Survey (hereinafter referred to as "the Survey"), conducted by JICA on a requested project (hereinafter referred to as "the Project"), is to provide a outline document necessary for the appraisal of the Project by the Government of Japan. The contents of the Survey are as follows:

a) confirmation of the background, objectives and benefits of the Project and also institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation;
b) evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from the technical, social and economic points of view;
c) confirmation of items agreed on by both parties concerning the outline concept of the Project;
d) preparation of a outline design of the Project; and
e) estimation of costs of the Project.

Government of Japan. This "Verification" is deemed necessary to secure accountability of Japanese taxpayers.

5) Undertakings required to the Government of the recipient country

a) to secure a lot of land necessary for the construction of the Project and to clear the site;

b) to provide facilities for distribution of electricity, water supply and drainage and other incidental facilities outside the site;

c) to ensure prompt unloading and customs clearance at ports of disembarkation in the recipient country and internal transportation therein of the products purchased under the Grant Aid;

d) to exempt Japanese nationals from customs duties, internal taxes and fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contracts;

e) to accord Japanese nationals whose services may be required in connection with the supply of the products and services under the verified contracts such as facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work;

f) to ensure that the facilities constructed and products purchased under the Grant Aid be maintained and used properly and effectively for the Project; and

g) to bear all the expenses, other than those covered by the Grant Aid, necessary for the Project.

6) "Proper Use"

The recipient country is required to maintain and use the facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign the necessary staff for operation and maintenance of them as well as to bear all the expenses other than those covered by the Grant Aid.

7) "Re-export"

The products purchased under the Grant Aid shall not be re-exported from the recipient country.

8) Banking Arrangement (B/A)

a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in an authorized foreign exchange bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the verified contracts.

b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an Authorization to Pay issued by the Government of recipient country or its designated authority.

9) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commission to the Bank.

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid project. The Outline Design of the Project is confirmed considering the guidelines of Japan's Grant Aid Scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even through they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

2) Selection of Consultants

For the smooth implementation of the Survey, JICA uses a consulting firm selected through its own procedure (competitive proposal). The selected firm participates the Survey and prepares a report based upon the terms of reference set by JICA.

At the beginning of implementation after the Exchange of Notes, for the services of the Detailed Design and Construction Supervision of the Project, JICA recommends the same consulting firm which participated in the Survey to the recipient country, in order to maintain the technical consistency between the Outline Design and Detailed Design as well as to avoid any undue delay caused by the selection of a new consulting firm.

3. Japan's Grant Aid Scheme

1) Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the project, period of execution, conditions and amount of the Grant Aid, etc., are confirmed.

2) "The period of the Grant" means the one fiscal year which the Cabinet approves the project for. Within the fiscal year, all procedure such as exchanging of the Notes, concluding contracts with consulting firms and contractors and final payment to them must be completed.
However, in case of delays in delivery, installation or construction due to unforeseen factors such as weather, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

3) Under the Grant, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

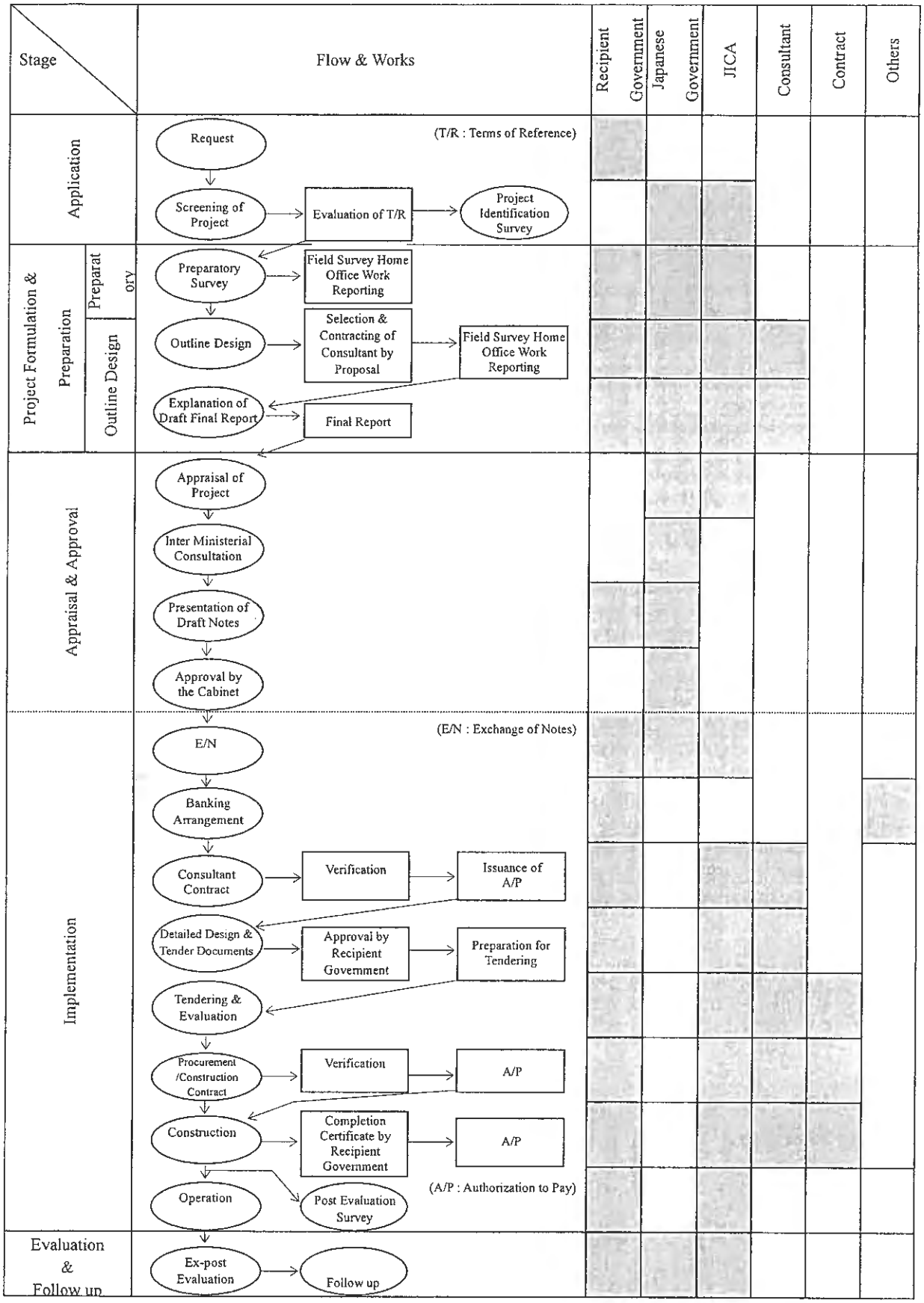
When the two Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country.

However, the prime contractors, namely consulting, contracting and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

4) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by the

FLOW CHART OF JAPAN's GRANT AID PROCEDURES



Major Undertakings to be taken by Each Government (Construction)

No.	Items	To be covered by Grant Aid	To be covered by Recipient Side
1	to secure [a lot] /[lots] of land necessary for the implementation of the Project and to clear the [site]/[sites];		●
2	To ensure prompt unloading and customs clearance of the products at ports of disembarkation in the recipient country and to assist internal transportation of the products		
	1) Marine (Air) transportation of the Products from Japan to the recipient country	●	
	2) Tax exemption and custom clearance of the Products at the port of disembarkation		●
	3) Internal transportation from the port of disembarkation to the project site	(●)	(●)
3	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the purchase of the products and the services be exempted		●
4	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		●
5	To ensure that [the Facilities and the products]/[the Facilities]/ [the products] be maintained and used properly and effectively for the implementation of the Project		●
6	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project		●
7	To bear the following commissions paid to the Japanese bank for banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●
8	To give due environmental and social consideration in the implementation of the Project.		●

(B/A: Banking Arrangement, A/P: Authorization to pay)

Project Cost Estimation (Confidential)

Total Project Cost Estimation (including cost borne by the Japanese side and the Kenyan side);

Total Approx. 1,059 million JPY (Approx. 12.8 million US$)

1. Cost borne by the Japanese side

Items		Estimated Cost □million JPY□	
Construction	Water Supply Facilities (90) (Borehole, Pumping system, Elevated water tank, Transmission pipes, Water kiosk, Cattle trough and Fence)	800	805
Procurement	Vehicle, Motorbikes, Computer, Printer	5	
Detailed Design, Construction Supervision, Soft Component		222	
Total		1,027 (US$12.5million)	

2. Cost borne by The Kenyan side

Item	Estimated Cost (million Ksh)
1) Preparation for basecamp in Kabarnet and Margat	0.5
2) Distribution of commercial power line to 37 sites	23.8
3) Application and acquisition for EIA license	0.8
4) Application and acquisition for drilling boreholes	0.3
5) C/P activity expenses	4.0
6) Payment Commission to Bank	0.6
Total	30.0 (US$ 0.4 million) (31.5 million JPY)

□Note: 1) Estimation Base June 2011

2) Exchange Rate 1 US$ = 82.48 JPY

1 Ksh = 1.050 JPY