

8 . Results of Test Drilling

1. Location of Test Drilling

Test drilling conducted 6 communities for high priority of water development, which was selected among 44 communities through the geophysical survey in “BD1”.

The geological characteristics of selected communities are as follows:

- Fissure was found by geophysical survey (2 communities)
- Thickness of weathered zone is about 25m (1 community)
- Thickness of weathered zone is about 30m (2 communities)
- Thickness of weathered zone is more than 40m (1 community)

Table H-1 Location of Test boreholes

LGA	Community	Results of Geophysical Survey
IBARAPA NORTH	No.2 OKE OLA I	Thickness of weathered zone is about 25m which may be minimum thickness required for water development
IBARAPA NORTH	No.37 ABA IBADAN	Fissure was found by geophysical survey
IBARAPA NORTH	No.86 IDIFA IDERE	Thickness of weathered zone is about 30 m which may be enough thickness required for water development
ORIRE	No.4 ELEKULU	Thickness of weathered zone is about 50 m which may be enough thickness required for water development
ORIRE	No.20 ELEYELE	Fissure was found by geophysical survey
ORIRE	No.45 OLOKUN	Thickness of weathered zone is about 30 m which may be enough thickness required for water development

2 . Result of Test Drilling

The test drilling conducted in LGA IBARAPA NORTH (3communities) and LGA ORIRE (3 communities)

3 communities among 6 Test Drillings were successful (Yield is more than 12liter/min).

Results of test borehole are as follows.

No.2 OKE OLA I (IBARAPA NORTH)

Drilling depth is 32m. Yield is more than100 liter/min.

Successful borehole.

Lithology : 0-2m Laterite, 2-26m Weathered granite and gneiss, 26- 32m basement (Gneiss) Depth of aquifer is 20m to 26m. Test borehole is similar to analysis of geophysical survey.

No.37 ABA IBADAN (IBARAPA NORTH)

Drilling depth is 20m. Yield is less than 5lter/min.

Unsuccessful borehole.

Lithology: 0-4m Laterite, 4-14m Weathered gneiss,14-20m Basement (Gneiss)

Depth of fissure zone is 17m ~ 18m. Depth of aquifer is 13 ~ 14m and 17m ~ 18m

Test borehole is similar to analysis of geophysical survey.

No.86 IDIFA IDERE (IBARAPA NORTH)

Drilling depth is 41m. Yield is less than 10 liter/min.

Unsuccessful borehole

Lithology: 0-5 m Laterite, 4-35m Weathered gneiss, 35-41m Basement (Gneiss)

Depth of aquifer is 25 ~ 35m .

Analysis of geophysical survey should the depth of basement as 37m, and community was expected to promising of water development.

No.4 ELEKULU (ORIRE)

Drilling depth is 48.5m. Yield is more than 50 liter/min.

Successful borehole.

Lithology: 0-5 m Laterite, 5-47m Weathered gneiss, 47-48.5m Basement (Gneiss)

Depth of main aquifer is 40 ~ 47m .

Analysis of geophysical survey should the depth of basement as 50m.

No.20 ELEYELE (ORIRE)

Drilling depth is 27m. Yield is less than 8.5 liter/min.

Unsuccessful borehole.

Lithology: 0-3m Laterite, 3-13m Weathered granite and gneiss, 13-27m Basement (Gneiss)

Depth of main aquifer is 20 ~ 21m (fissure) .

Analysis of geophysical survey should the depth of fissure zone as 24 m.

No.45 OLOKUN (ORIRE)

Drilling depth is 35m. Yield is more than 50 liter/min.

Successful borehole.

Lithology: 0-1m Laterite, 1-31m Highly weathered gneiss and granite, 31-34m Weathered gneiss, 34-35m Basement (Gneiss)

Depth of main aquifer is 28 ~ 34m .

Analysis of geophysical survey should the depth of basement as 32m. Test borehole is similar to analysis of geophysical survey.

Drilling log is shown in Fig.H-1.

JICA

LOG OF TEST DRILLING 2

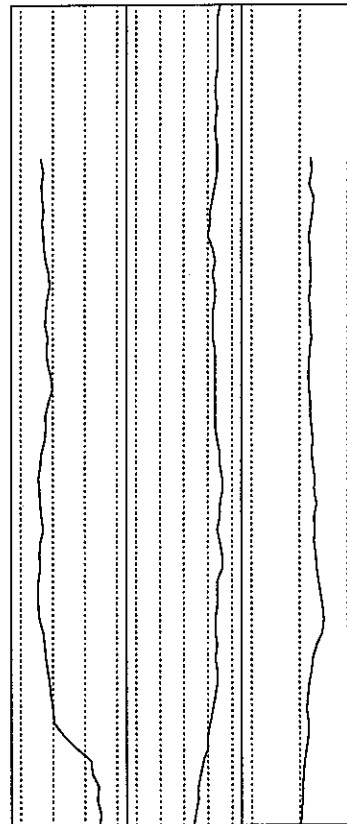
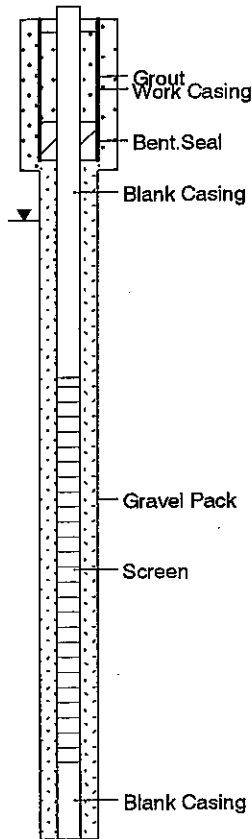
(Page 1 of 1)

Basic Design Study on the Rural Water Supply and Sanitation Project in Oyo State

LGA : Ibarapa North
 Village : Oke-Ola 1
 Location : 7 40' 43"
 : 3 10' 43"

Date : March 2002
 Elevation :
 Yield : 105 l/m
 Final Drilling Depth : 32m

Depth in m	GRAPHIC	DESCRIPTION	Well: Elekulu4				REMARKS
			Resist. a=0.25m	Gamma	SP mV		
0		Laterite, brown				0 5.5m: Mud Drilling	
0-10		Weathered granite brown, midium				5.5-41: DTH	
10-20		Weathered Gneiss, bluely gray, coarse				Static Water level: GL-7.84 Yield: 105 l/min. Dynamic Water Level: GL-21.23m (2 hrs.) Recovery Time: 8hrs.25 min.	
20-30		Gneiss, bluely gray, fine					
30-40							
40-50							



JICA

LOG OF TEST DRILLING 37

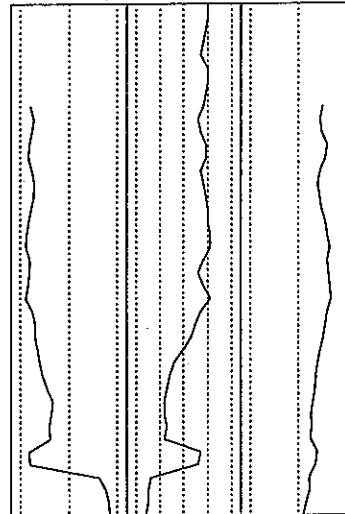
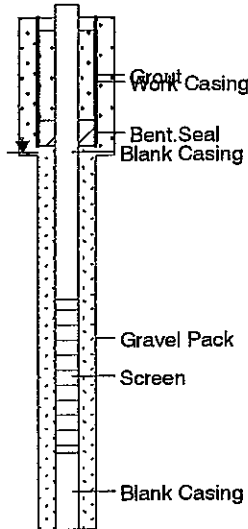
(Page 1 of 1)

Basic Design Study on the Rural Water Supply and Sanitation Project in Oyo State

LGA : Ibarapa North
 Village : Aba-Ibadan
 Location : 7 43' 36"
 : 3 07' 53"

Date : March 2002
 Elevation :
 Yield : 3.0-4.5 l/m
 Final Drilling Depth : 20m

Depth in m	GRAPHIC	DESCRIPTION	Well: Aba-Ibadan			REMARKS
			Resist. a=0.25m	Gamma	SP mV	
0		Laterite, brown				0-5m: Mud Drilling
5		Weathered gneiss bluey gray, midium				5-20: DTH
10		Quartzite, white, fine				Static Water Level: GL-5.25m
15		Gneiss, white, fine				Yield: 3.5-4.5 Liter/Min
20						Dynamic Water Level: GL-16.99m (90 min.) Recovery Time: 8hr25min.
30						
40						
50						



JICA

LOG OF TEST DRILLING 86

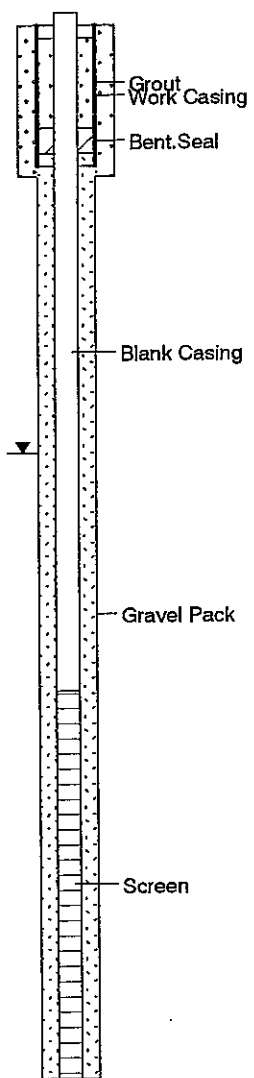
(Page 1 of 1)

Basic Design Study on the Rural Water Supply and Sanitation Project in Oyo State

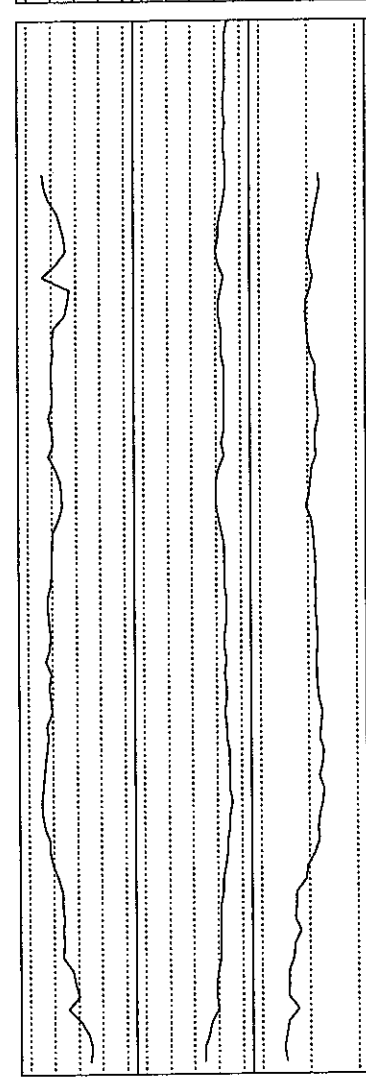
LGA : Ibarapa North
 Village : Idifa-Idere
 Location : 7 34' 52"
 : 3 07' 09"

Date : March 2002
 Elevation :
 Yield : 6 l/m
 Final Drilling Depth : 41m

Depth in m	GRAPHIC	DESCRIPTION	Well: Idifa-Idere			REMARKS
			Resist. a=0.25m	Gamma	SP mV	
0		Laterite, brown				0 5.5m: Mud Drilling
5.5		Weathered gneiss brown, midium				5.5-41: DTH
10						Static Water level: GL-16.70m Yield: 6 l/m Dynamic Water Level: GL-21.23m 1 hrs. 50min. Water Level
20						
30						
35		Gneiss with plenty of mica, bluely gray, fine				
40						
50						



Resist. a=0.25m
 Gamma
 SP mV



JICA

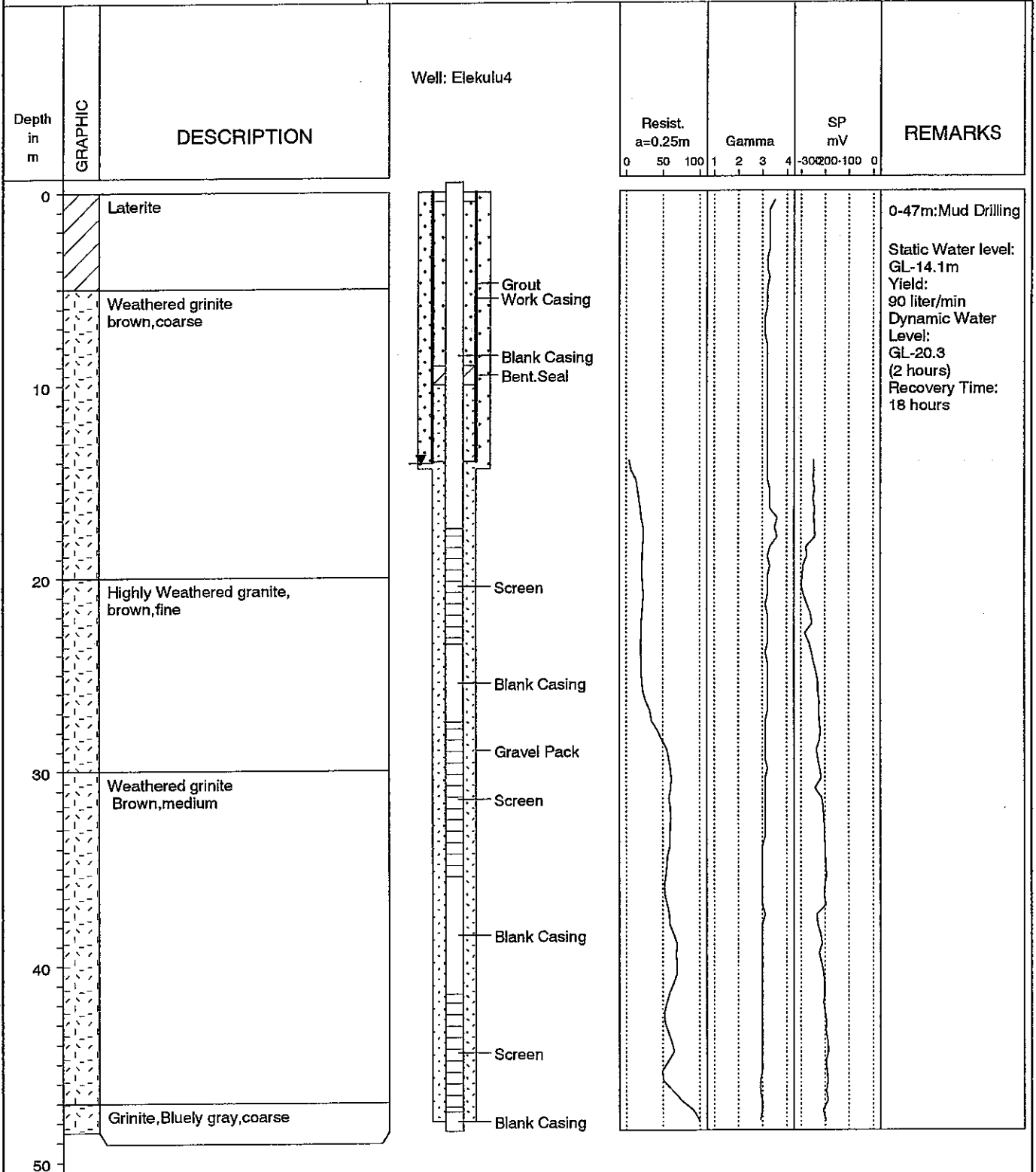
LOG OF TEST DRILLING 4

(Page 1 of 1)

Basic Design Study on the Rural Water Supply and Sanitation Project in Oyo State

LGA : Orire
 Village : Elekulu
 Location : 8 23' 26"
 : 4 18' 28"

Date : February 2002
 Elevation :
 Yield : 90 l/m
 Final Drilling Depth : 48.5m



JICA

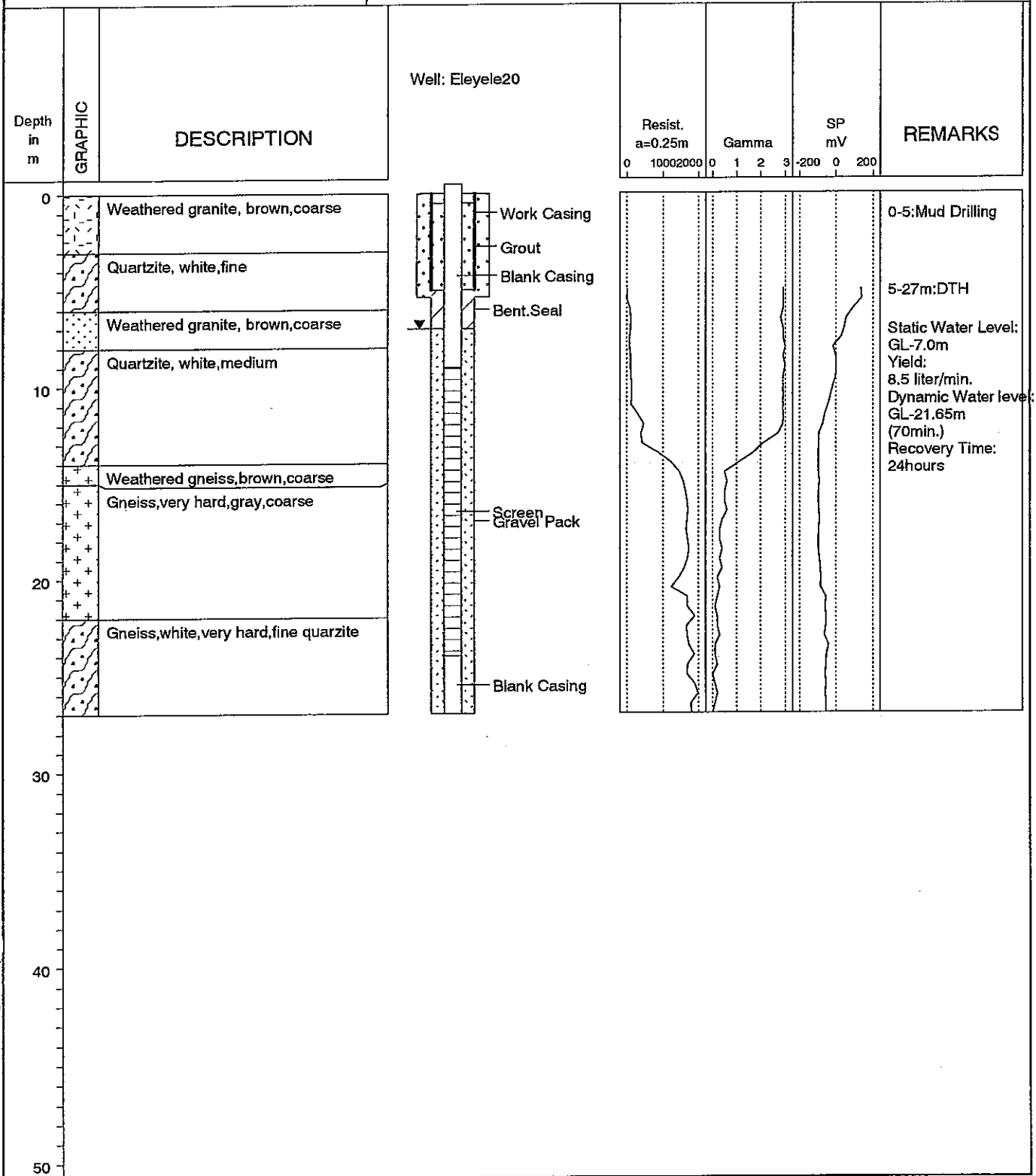
LOG OF TEST DRILLING 20

(Page 1 of 1)

Basic Design Study on the Rural Water Supply and Sanitation Project in Oyo State

LGA : Orire
 Village : Eleyele
 Location : 8 28' 52"
 : 4 11' 44"

Date : February 2002
 Elevation :
 Yield : 8.5 l/m
 Final Depth : 27m



JICA

LOG OF TEST DRILLING 45

(Page 1 of 1)

Basic Design Study on the Rural Water Supply and Sanitation Project in Oyo State

LGA : Orire
 Village : Olukun
 Location : 8 21' 22"
 : 4 18' 33"

Date : March 2002
 Elevation :
 Yield : 30 l/min.
 Final Drilling Depth : 35m

Depth in m	GRAPHIC	DESCRIPTION	Well: Elekulu4				REMARKS
			Resist. a=0.25m	Gamma	SP mV		
0		Laterite					0-11.5m: Mud Drilling 11.5-35: DTH Static Water level: GL: 9.2m Yield: 30l/min. Dynamic Water Level: GL: 16.24m (2 hrs.) Recovery Time 1hrs.40min.
		Highly Weathered granite brown, coarse					
		Highly Weathered granite with feldspar, brown, fine					
		Contact point Highly Weathered gneiss Brown, medium					
10		Highly weathered gneiss, brown, coarse					
		Highly weathered gneiss with some quartzite veins, brown, coarse					
20		Gneiss partially weathered gneiss, blue gray, coarse					
		Gneiss, blue gray, coarse,					
30							
40							
50							

