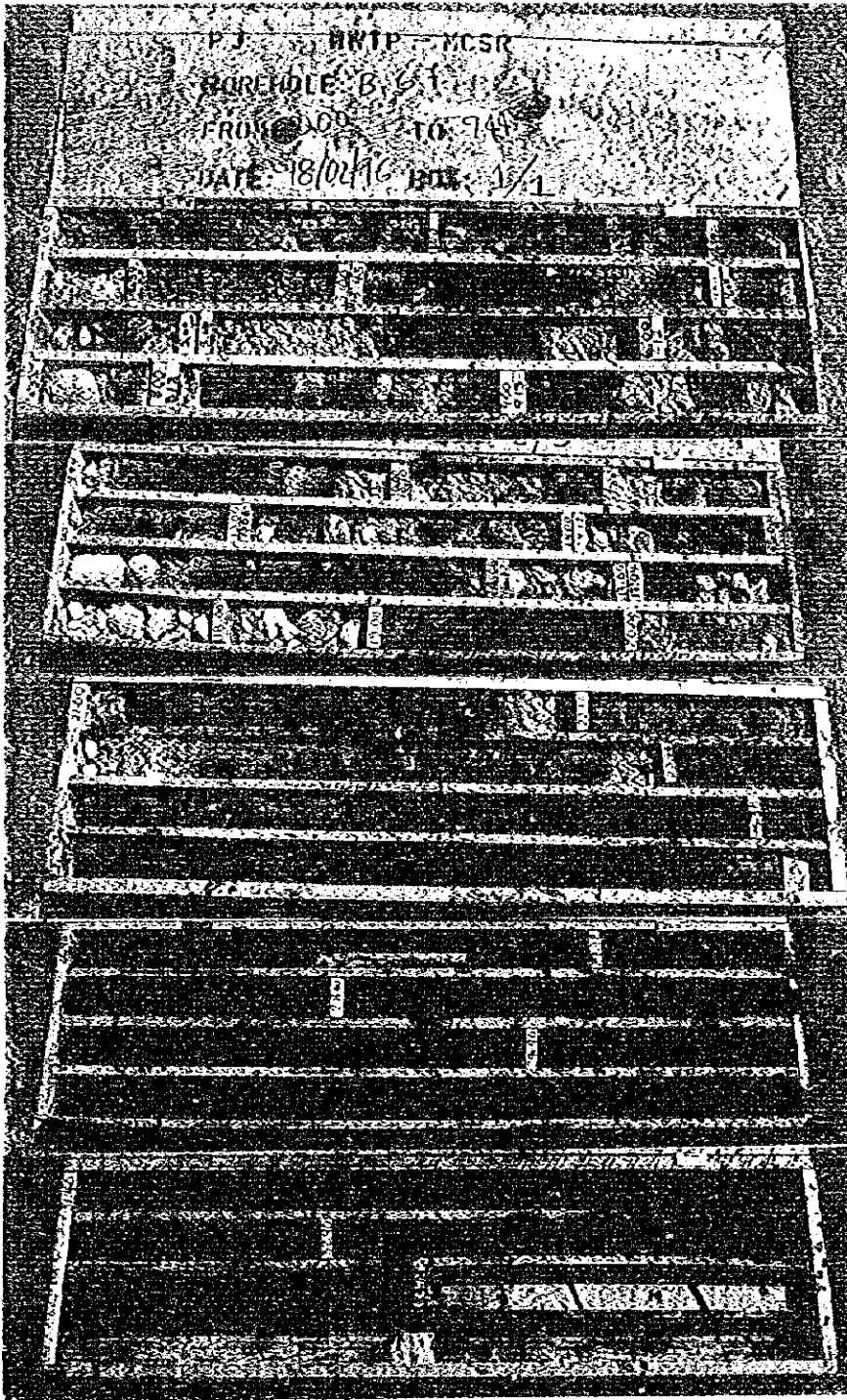


B - 6, 7  
(Chinautla River)



0.00 ~ 9.44 m  
18/2/96

9.44 ~ 21.00 m  
18/2/96

21.00 ~ 26.90 m  
18/2/96

26.90 ~ 31.40 m  
18/2/96

31.40 ~ 34.00 m  
18/2/96

<p>THE REPUBLIC OF GUATEMALA</p> <p>GUATEMALA MUNICIPAL WATER SUPPLY PUBLIC CORPORATION (EMPAGUA)</p>	<p>THE STUDY ON THE IMPROVEMENT OF WASTEWATER MANAGEMENT IN THE GUATEMALA METROPOLITAN AREA</p> <p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>	<p>TITLE</p> <p>PHOTOGRAPHS OF BOREHOLE LOG : B-6,7</p>
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DC - 19

BOREHOLE N. 88  
FROM: 0.00 TO: 4.86  
DATE: 3/3/96 BOX. 1

B - 8  
(Tzajja River)

0.00 ~ 4.86 m  
3/3/96

4.86 ~ 9.36 m  
4/3/96

9.36 ~ 15.30 m  
4/3/96

15.30 ~ 22.50 m  
4/3/96

22.50 ~ 27.25 m  
5/3/96

27.25 ~ 30.00 m  
5/3/96

THE REPUBLIC OF GUATEMALA

GUATEMALA MUNICIPAL WATER  
SUPPLY PUBLIC CORPORATION  
(EMPAGUA)

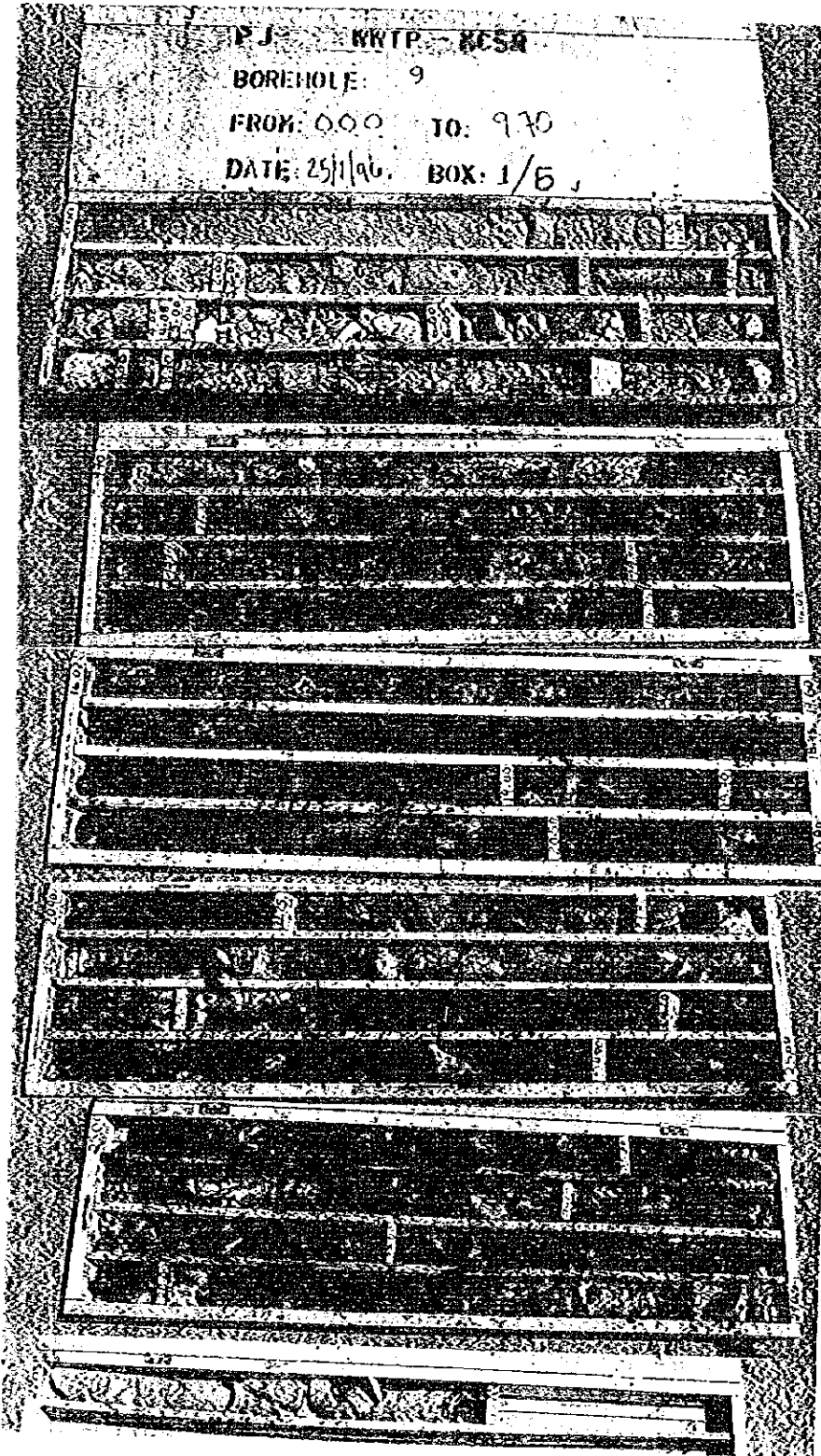
THE STUDY ON  
THE IMPROVEMENT OF WASTEWATER  
MANAGEMENT IN THE GUATEMALA  
METROPOLITAN AREA

JAPAN INTERNATIONAL COOPERATION AGENCY

TITLE

PHOTOGRAPHS OF  
BOREHOLE LOGS : B-8

DC - 20



B - 9  
(BRANCH OF  
TZALJA RIVER)

0.00 ~ 9.70 m  
25/1/96

9.70 ~ 16.02 m  
25/1/96

16.02 ~ 20.90 m  
25/11/96

20.90 ~ 25.00 m  
25/1/96

25.00 ~ 29.05 m  
25/1/96

29.05 ~ 30.00 m  
25/1/96

THE REPUBLIC OF GUATEMALA

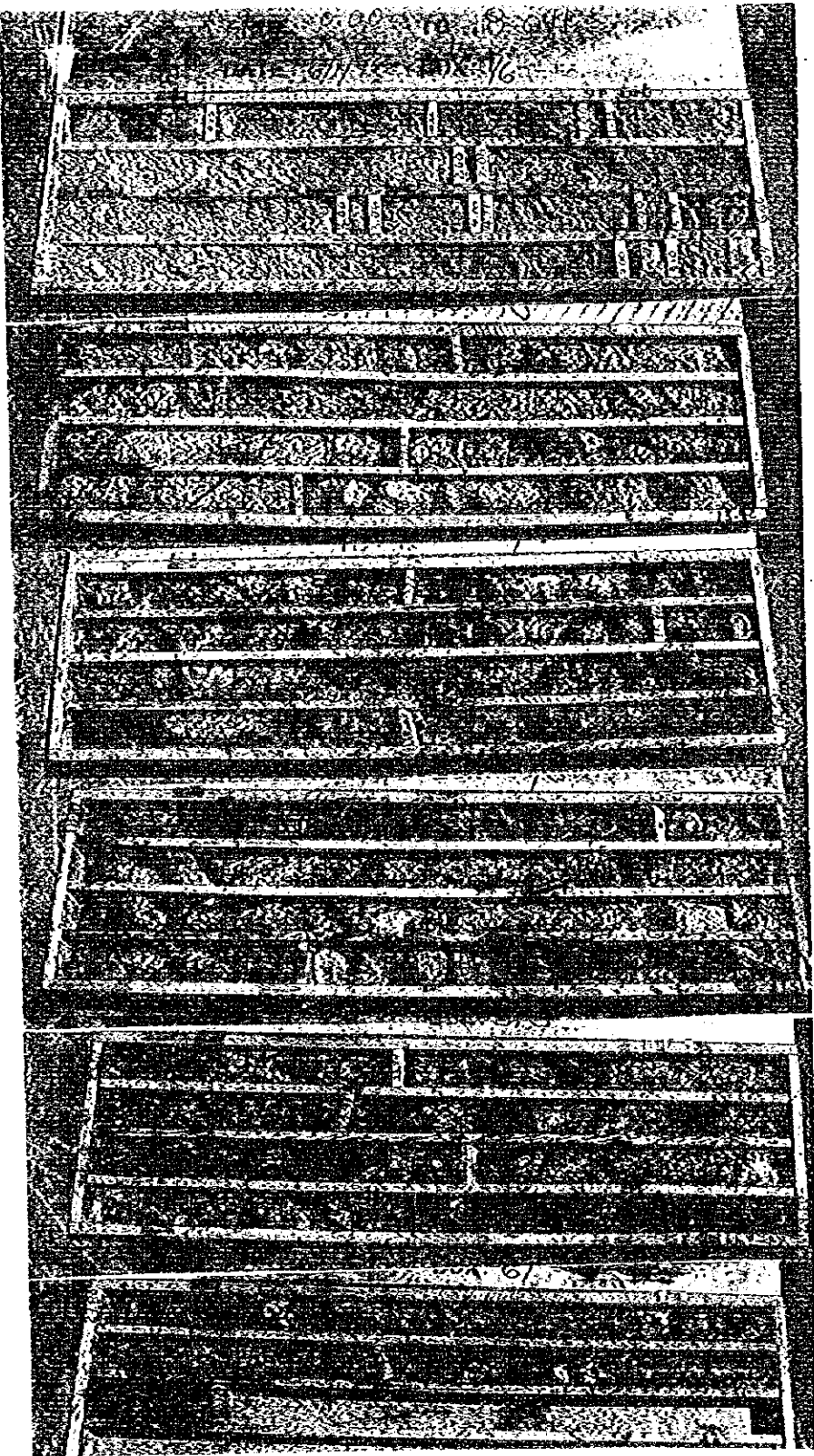
GUATEMALA MUNICIPAL WATER  
SUPPLY PUBLIC CORPORATION  
(EMPAGUA)

THE STUDY ON  
THE IMPROVEMENT OF WASTEWATER  
MANAGEMENT IN THE GUATEMALA  
METROPOLITAN AREA

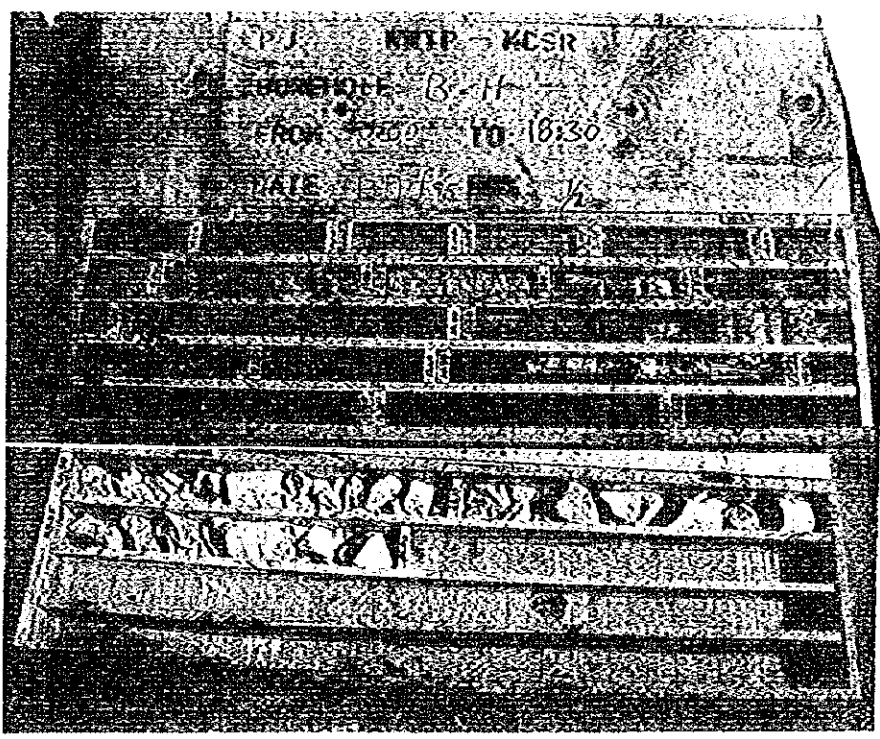
JAPAN INTERNATIONAL COOPERATION AGENCY

TITLE

PHOTOGRAPHS OF  
BOREHOLE LOG : B-9

		DC - 21
		B - 10 (Juez River)
		0.00 ~ 8.04 m 6/1/96
		8.04 ~ 13.42 m 8/1/96
		13.42 ~ 18.81 m 9/1/96
		18.81 ~ 23.51 m 9/1/96
23.51 ~ 27.80 m 9/1/96		
27.80 ~ 30.00 m 14/1/96		
<p>THE REPUBLIC OF GUATEMALA</p> <p>GUATEMALA MUNICIPAL WATER SUPPLY PUBLIC CORPORATION (EMPAGUA)</p>	<p>THE STUDY ON THE IMPROVEMENT OF WASTEWATER MANAGEMENT IN THE GUATEMALA METROPOLITAN AREA</p> <p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>	<p>TITLE</p> <p>PHOTOGRAPHS OF BOREHOLE LOG : B - 10</p>

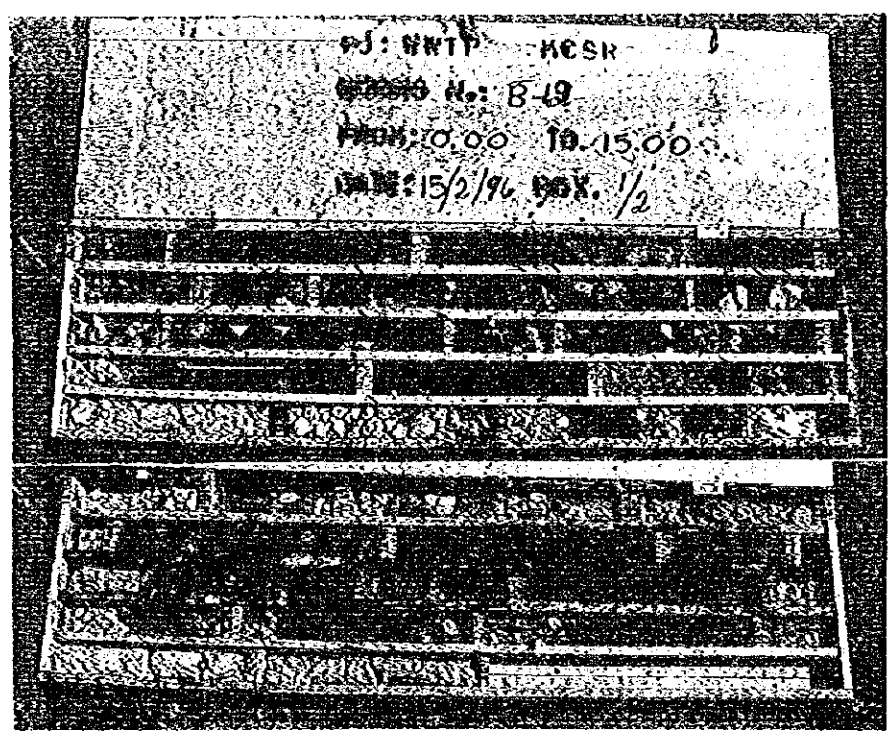
DC - 22



B - 11  
(Central WWTP)

0.00 ~ 18.30 m  
13/12/ 95

24.30 ~ 26.00 m  
13/12/ 95



B - 12  
(Pinula River)

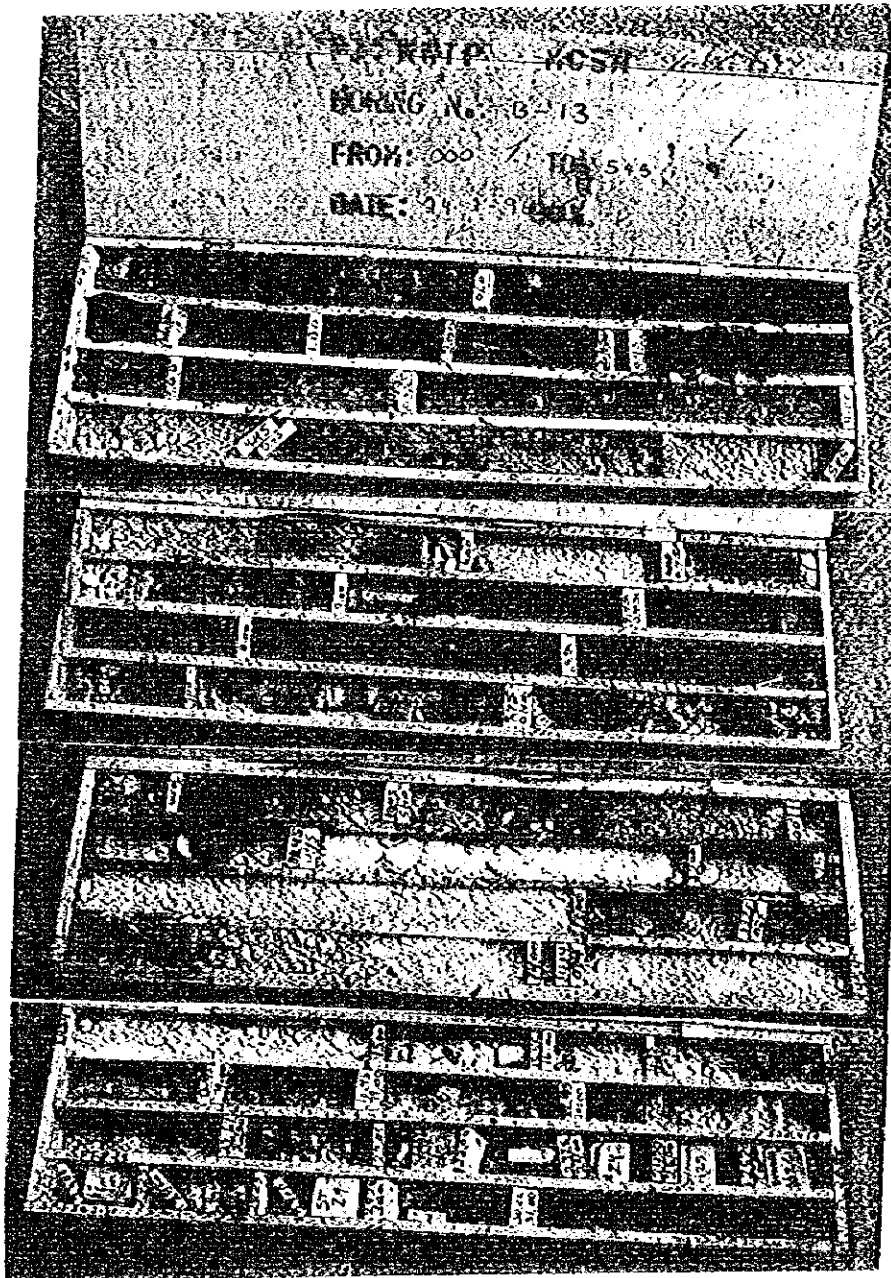
0.00 ~ 15.00 m  
15/12/ 95

15.00 ~ 30.45 m  
16/12/ 95

<p>THE REPUBLIC OF GUATEMALA</p> <p>GUATEMALA MUNICIPAL WATER SUPPLY PUBLIC CORPORATION (EMPAGUA)</p>	<p>THE STUDY ON THE IMPROVEMENT OF WASTEWATER MANAGEMENT IN THE GUATEMALA METROPOLITAN AREA</p> <p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>	<p>TITLE</p> <p>PHOTOGRAPHS OF BOREHOLE LOGS : B-11 AND B-12</p>
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DC - 23

B - 13  
(Boca del Monte)



0.00 ~ 5.45 m  
24/2/96

5.45 ~ 10.00 m  
24/2/96

10.00 ~ 14.54 m  
24/2/96

14.54 ~ 31.45 m  
25/2/96

THE REPUBLIC OF GUATEMALA

GUATEMALA MUNICIPAL WATER  
SUPPLY PUBLIC CORPORATION  
(EMPAGUA)

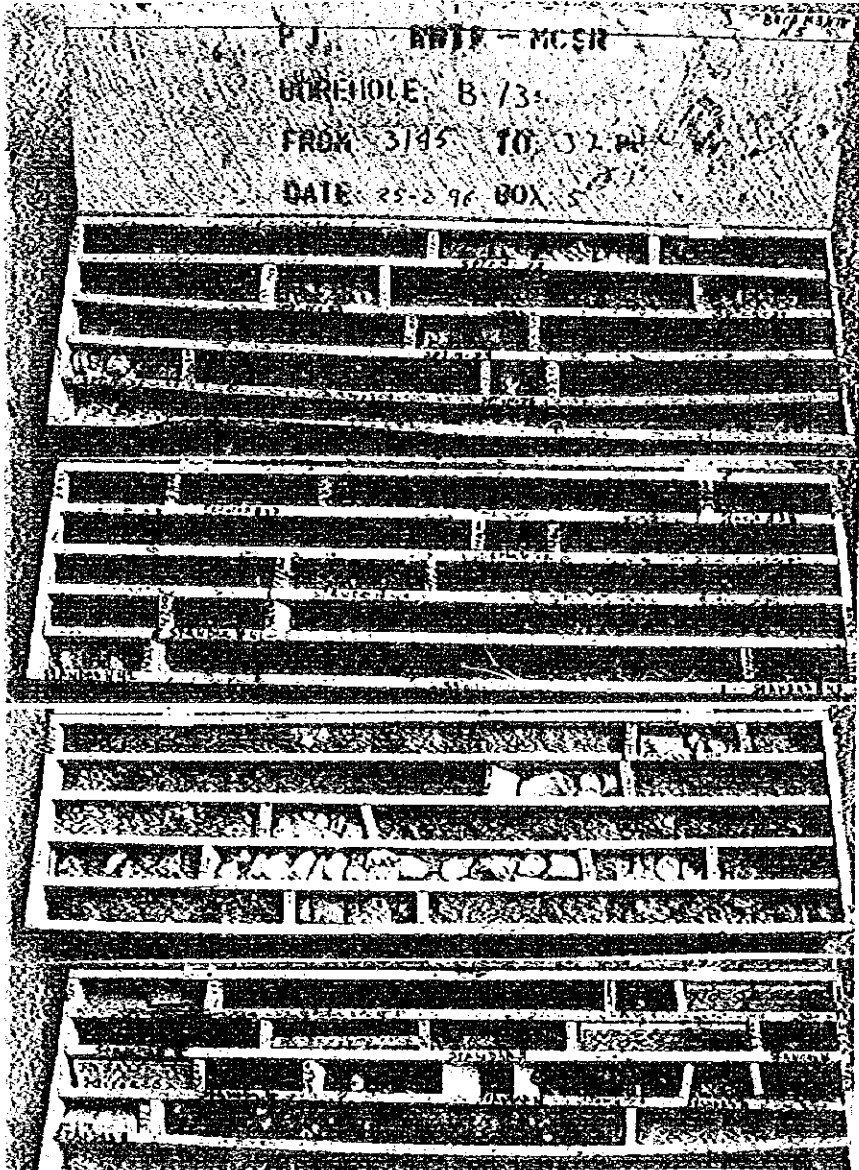
THE STUDY ON  
THE IMPROVEMENT OF WASTEWATER  
MANAGEMENT IN THE GUATEMALA  
METROPOLITAN AREA

JAPAN INTERNATIONAL COOPERATION AGENCY

TITLE

PHOTOGRAPHS OF  
BOREHOLE LOG : B-13 (1/2)

B - 13  
(Boca del Monte)



31.45 ~ 32.85 m  
25/2/ 96

32.85 ~ 44.14 m  
26/2/ 96

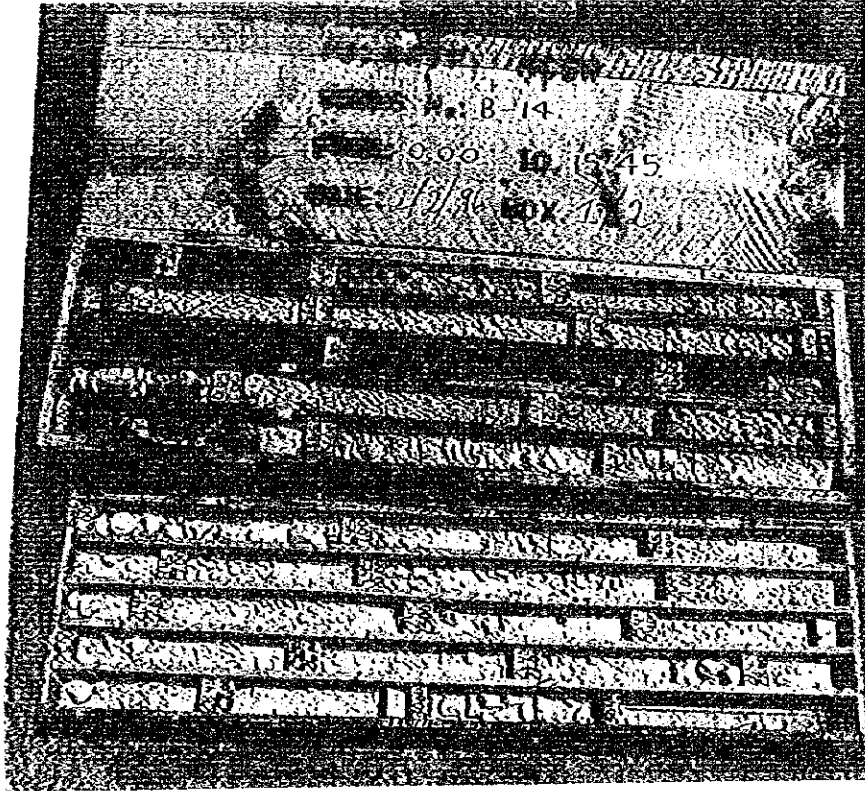
44.14 ~ 51.00 m  
27/2/ 96

51.00 ~ 60.00 m  
27/2/ 96

<p>THE REPUBLIC OF GUATEMALA</p> <p>GUATEMALA MUNICIPAL WATER SUPPLY PUBLIC CORPORATION (EMPAGUA)</p>	<p>THE STUDY ON THE IMPROVEMENT OF WASTEWATER MANAGEMENT IN THE GUATEMALA METROPOLITAN AREA</p> <p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>	<p>TITLE</p> <p>PHOTOGRAPHS OF BOREHOLE LOGS : B-13 (2/2)</p>
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DC - 25

B - 14  
(South 3 WWTP)



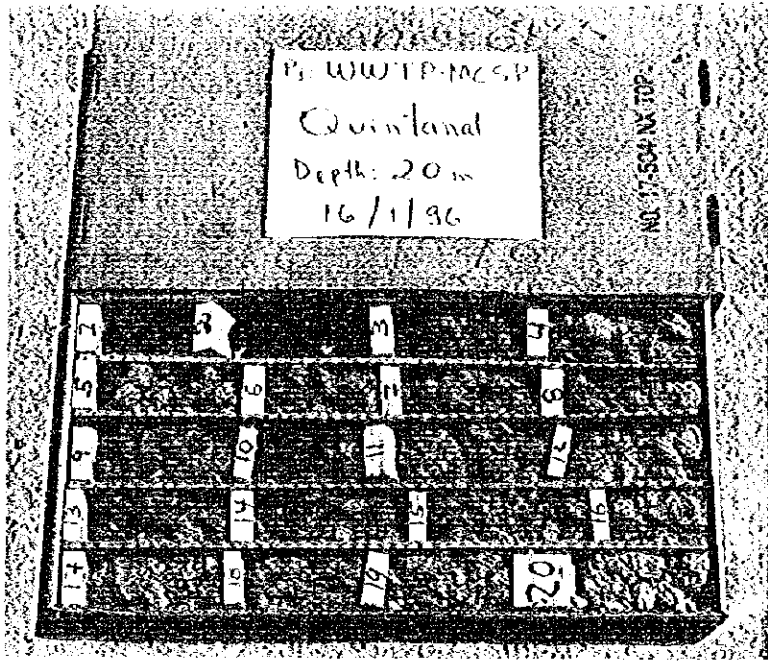
0.00 ~ 15.45 m  
2/2/96

15.45 ~ 30.45 m  
4/2/96

<p><b>THE REPUBLIC OF GUATEMALA</b></p> <p>GUATEMALA MUNICIPAL WATER SUPPLY PUBLIC CORPORATION (EMPAGUA)</p>	<p>THE STUDY ON THE IMPROVEMENT OF WASTEWATER MANAGEMENT IN THE GUATEMALA METROPOLITAN AREA</p> <p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>	<p>TITLE</p> <p><b>PHOTOGRAPHS OF BOREHOLE LOG : B-14</b></p>
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DC - 26



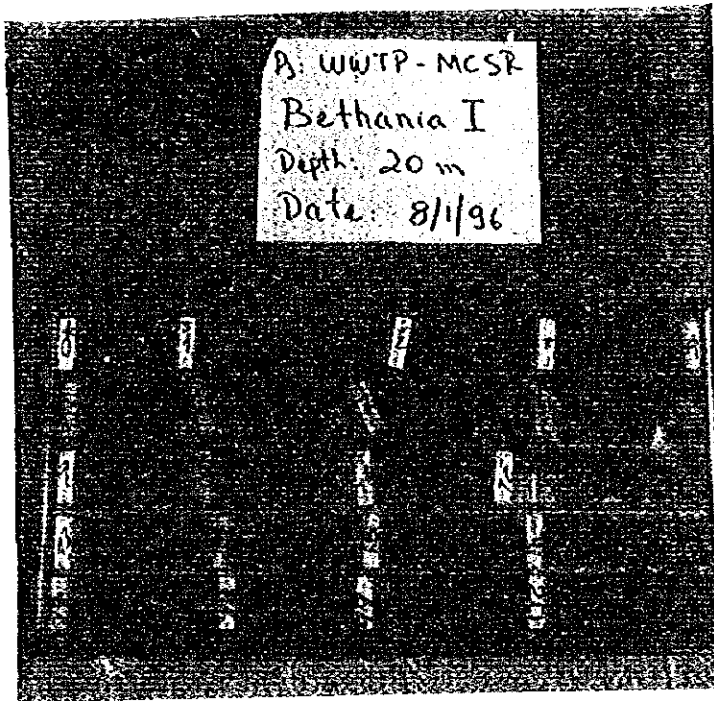
B - 15  
 Colonia  
 Quintanal  
 0 ~ 20 m  
 11/1/96

B - 16  
 Colonia  
 6 de Octubre  
 0 ~ 20 m  
 11/1/96

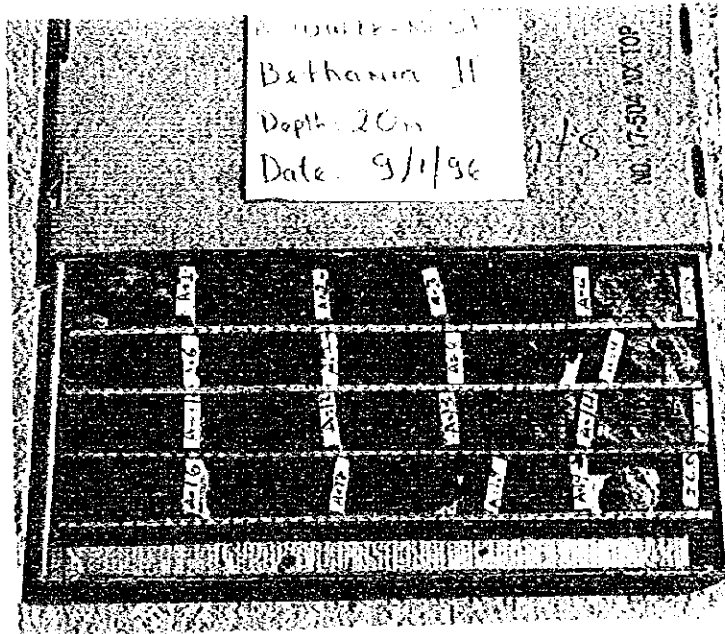


<p>THE REPUBLIC OF GUATEMALA</p> <p>GUATEMALA MUNICIPAL WATER        SUPPLY PUBLIC CORPORATION        (EMPAGUA)</p>	<p>THE STUDY ON        THE IMPROVEMENT OF WASTEWATER        MANAGEMENT IN THE GUATEMALA        METROPOLITAN AREA</p> <p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>	<p>TITLE</p> <p>PHOTOGRAPHS OF        BOREHOLE LOGS :        B-15 AND B-16</p>
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DC - 27



B - 17  
Colonia  
Bethania I  
0 ~ 20 m  
8/1/96



B - 18  
Colonia  
Bethania II

0 ~ 20 m  
9/1/96

THE REPUBLIC OF GUATEMALA

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JAPAN INTERNATIONAL COOPERATION AGENCY

TITLE

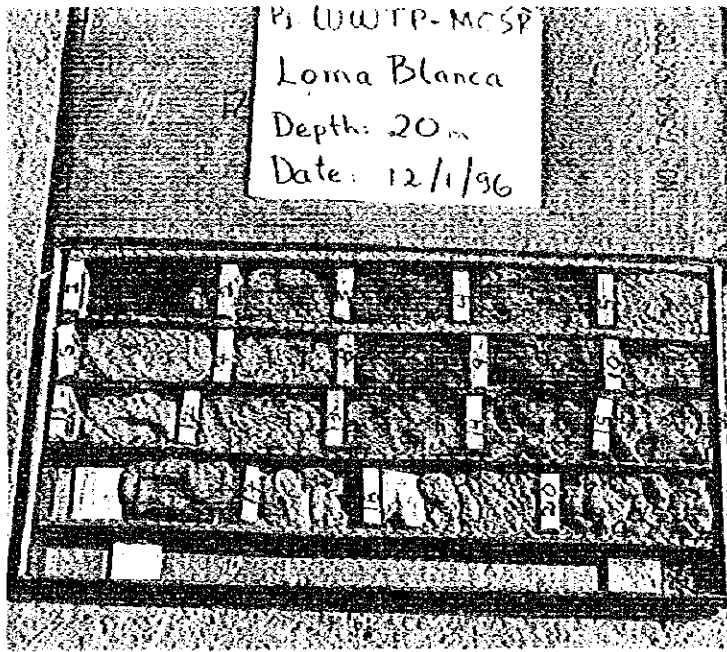
PHOTOGRAPHS OF  
BOREHOLE LOGS :  
B-17 AND B-18

DC - 28

B - 19  
Colonia  
Loma Blanca

0 ~ 20m

12/1/96



THE REPUBLIC OF GUATEMALA

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TITLE

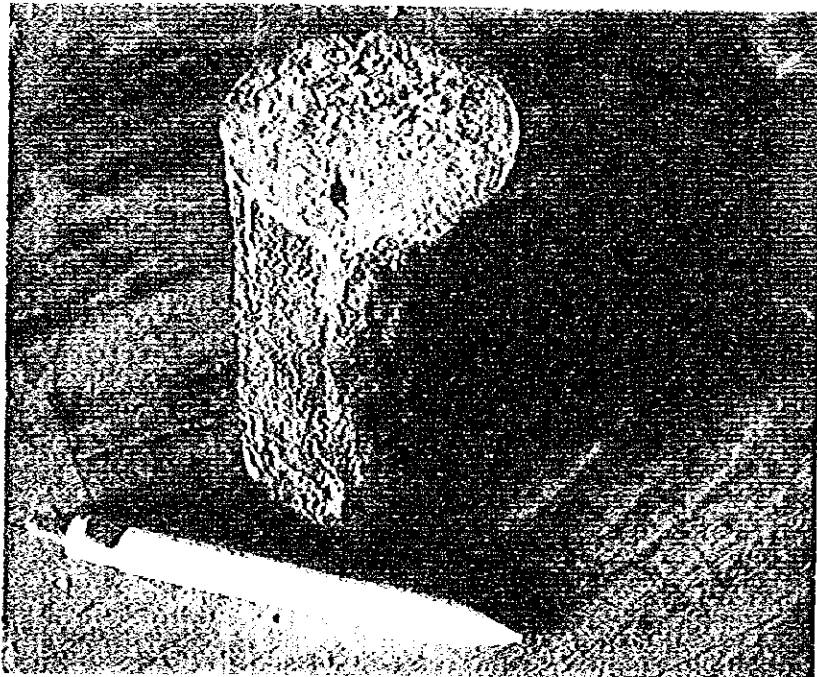
PHOTOGRAPHS OF  
BOREHOLE LOG :  
B-19

DC - 30

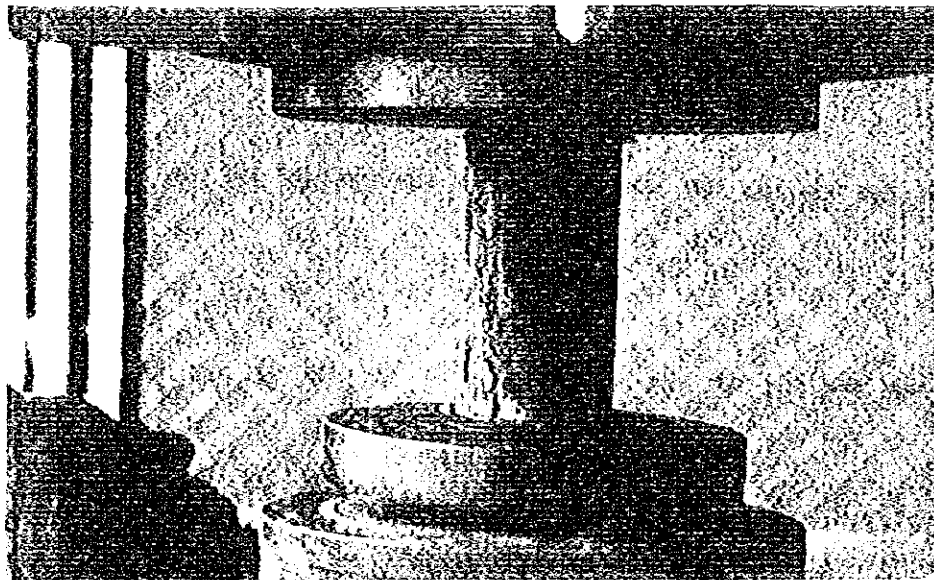
**DC 3    Photographs of Benchmarks**

DC - 29   Core Sample of Borehole B-6,7

DC - 30   Core Samples of Borehole B-6,7, B-9 and B-10

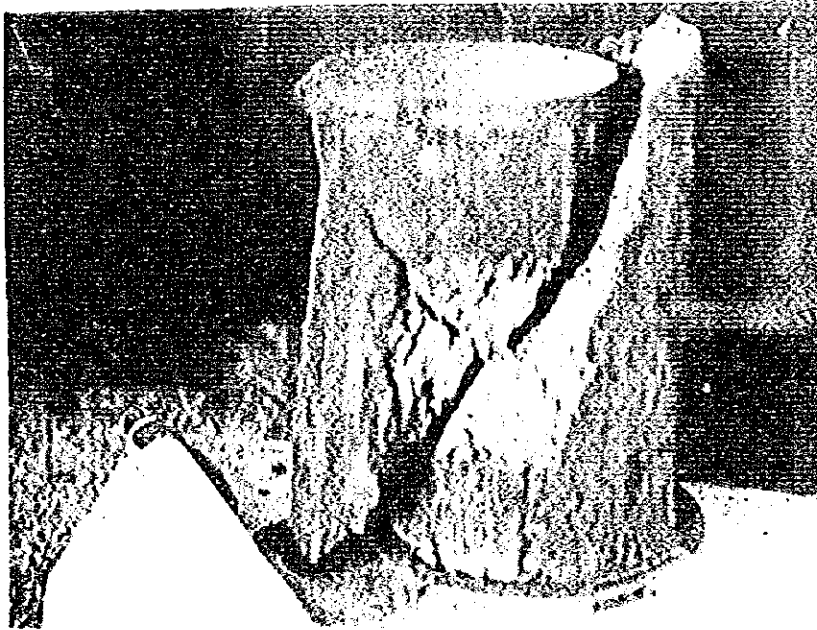


Core Sample of Borehole B-6,7 (26.9 m depth)

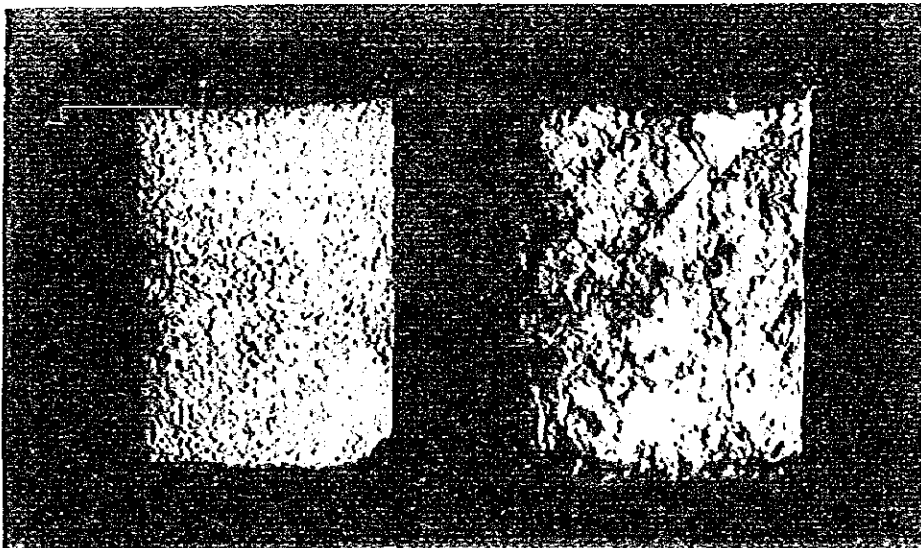


Unconfined Compression Test of Core Sample of Borehole B-6,7 (26.9 m depth)

<p>THE REPUBLIC OF GUATEMALA</p> <p>GUATEMALA MUNICIPAL WATER SUPPLY PUBLIC CORPORATION (EMPAGUA)</p>	<p>THE STUDY ON THE IMPROVEMENT OF WASTEWATER MANAGEMENT IN THE GUATEMALA METROPOLITAN AREA</p> <p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>	<p>TITLE</p> <p>CORE SAMPLE OF BOREHOLE B-6,7</p>
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Normal Failure of Core Sample of Borehole B-6,7 (26.9 m depth)



Core Samples (rock) of Borehole B-9 (left) and B-10 (right) (both 10.5 m depth)

<p>THE REPUBLIC OF GUATEMALA</p> <p>GUATEMALA MUNICIPAL WATER SUPPLY PUBLIC CORPORATION (EMPAGUA)</p>	<p>THE STUDY ON THE IMPROVEMENT OF WASTEWATER MANAGEMENT IN THE GUATEMALA METROPOLITAN AREA</p> <p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>	<p>TITLE</p> <p>CORE SAMPLE OF BOREHOLE B-6,7, B-9 AND B-10</p>
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## **DC 4 Photographs of Benchmarks**

DC - 31 Photographs of Benchmark : AAA-1

DC - 32 Photographs of Benchmark : KKK-7A

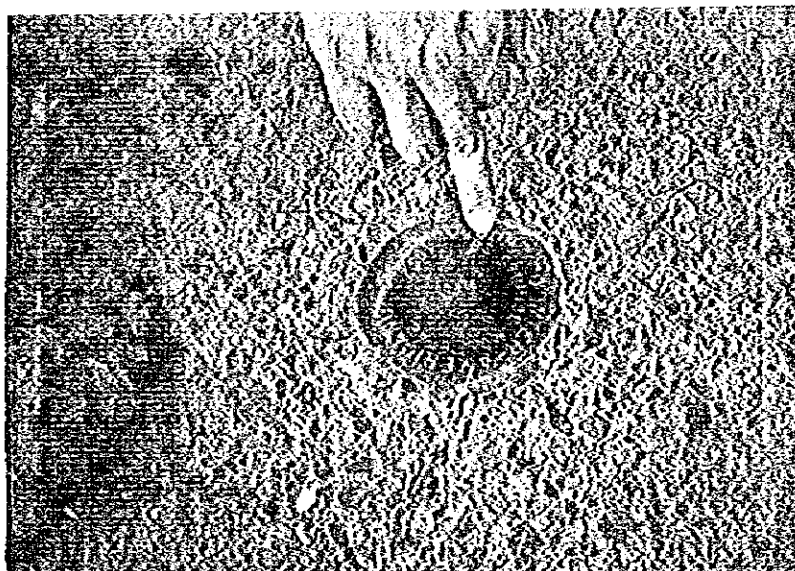
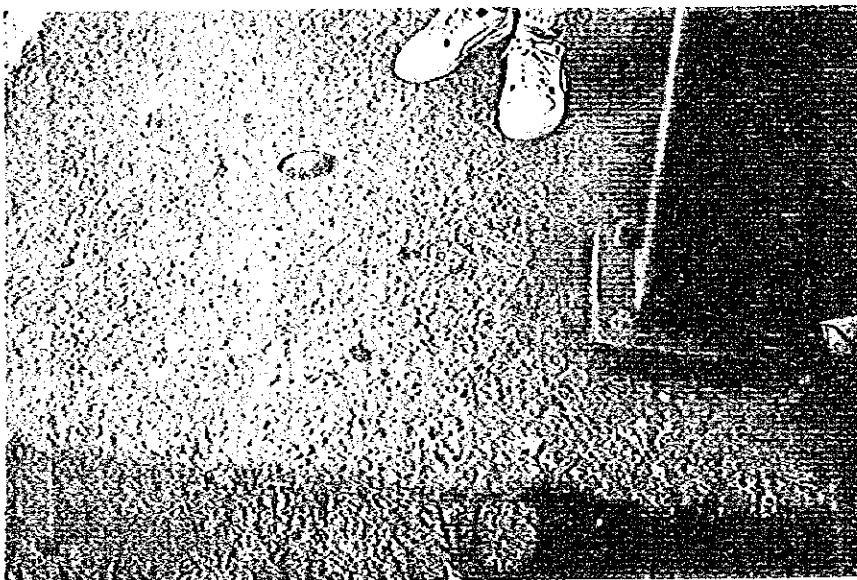
DC - 33 Photographs of Benchmark : KKK-4 and IAP-7

DC - 31

Belice Bridge

BM : AAA-1

1457.6892 m MSL



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TITLE

PHOTOGRAPHS OF  
BENCH MARK : AAA-1

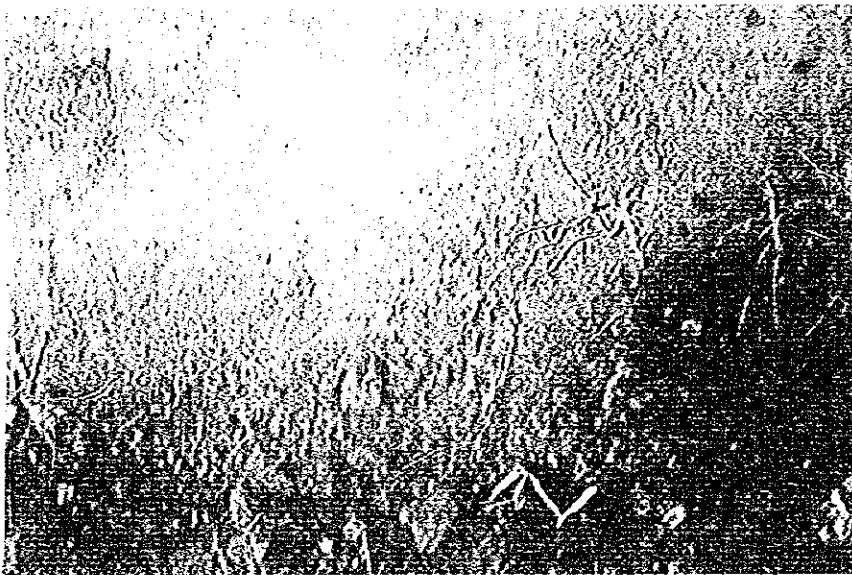
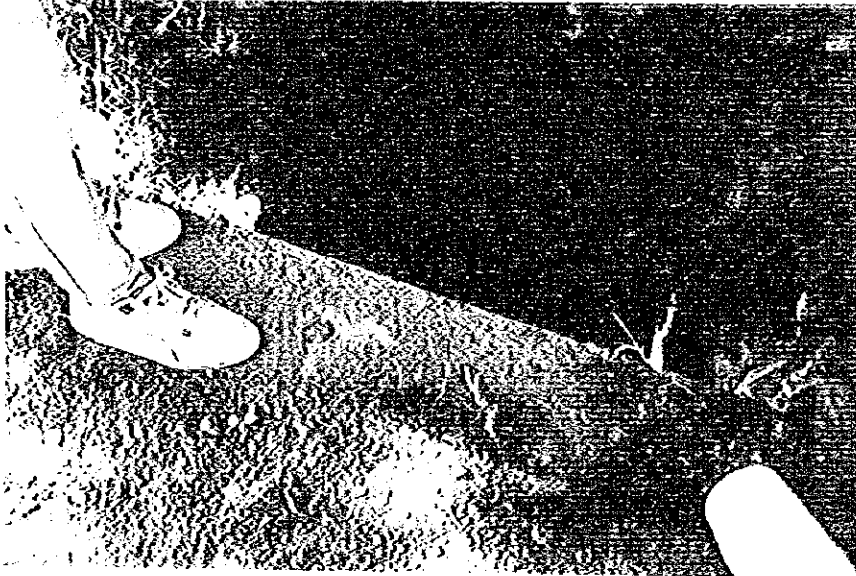


DC - 32

South 3  
Region Los  
Alamos

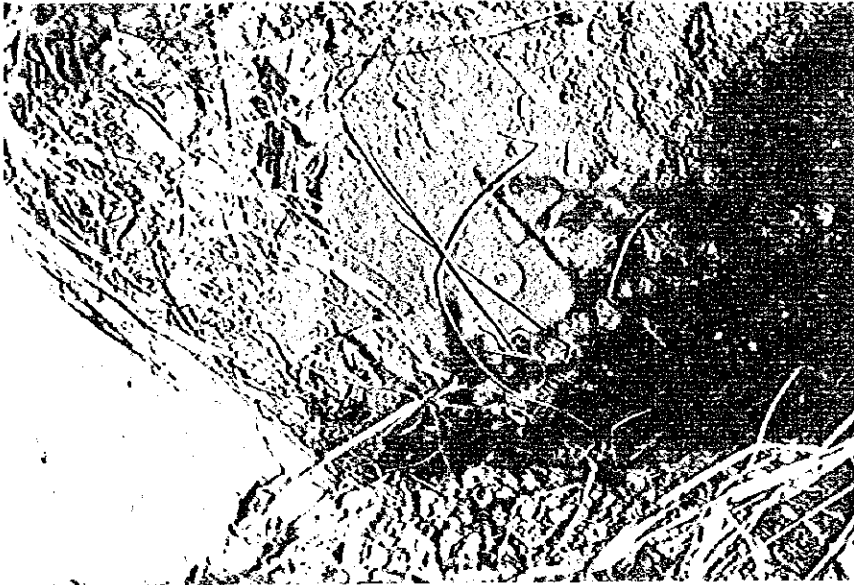
BM : KKK-7A

1292.7566 m MSL



<p><i>THE REPUBLIC OF GUATEMALA</i></p> <p>GUATEMALA MUNICIPAL WATER SUPPLY PUBLIC CORPORATION (EMPAGUA)</p>	<p>THE STUDY ON THE IMPROVEMENT OF WASTEWATER MANAGEMENT IN THE GUATEMALA METROPOLITAN AREA</p> <p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>	<p>TITLE</p> <p>PHOTOGRAPHS OF BENCH MARK : KKK-7A</p>
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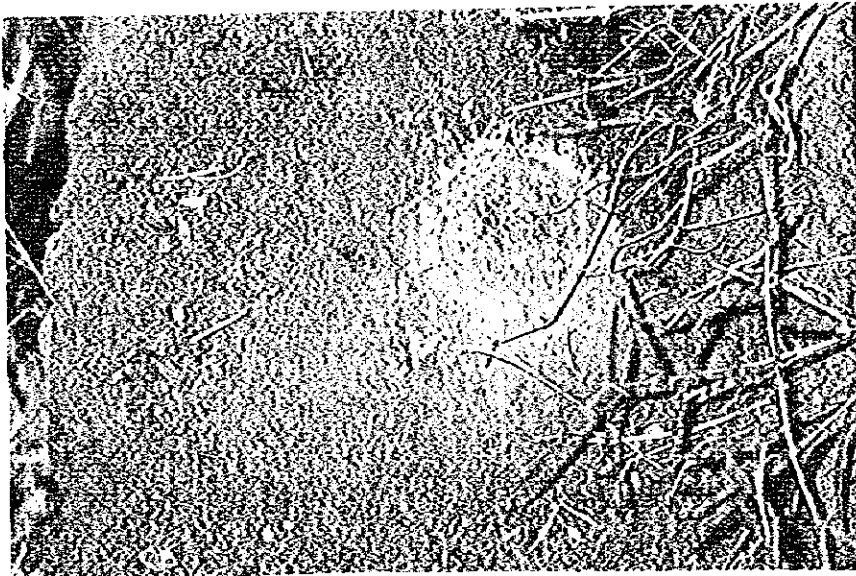
DC - 33



Hincapie  
Bridge

BM :KKK-4

1296.5249 m MSL



Bridge over  
Chinautla River

BM :IAP-7

1180.8891 m MSL

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JAPAN INTERNATIONAL COOPERATION AGENCY

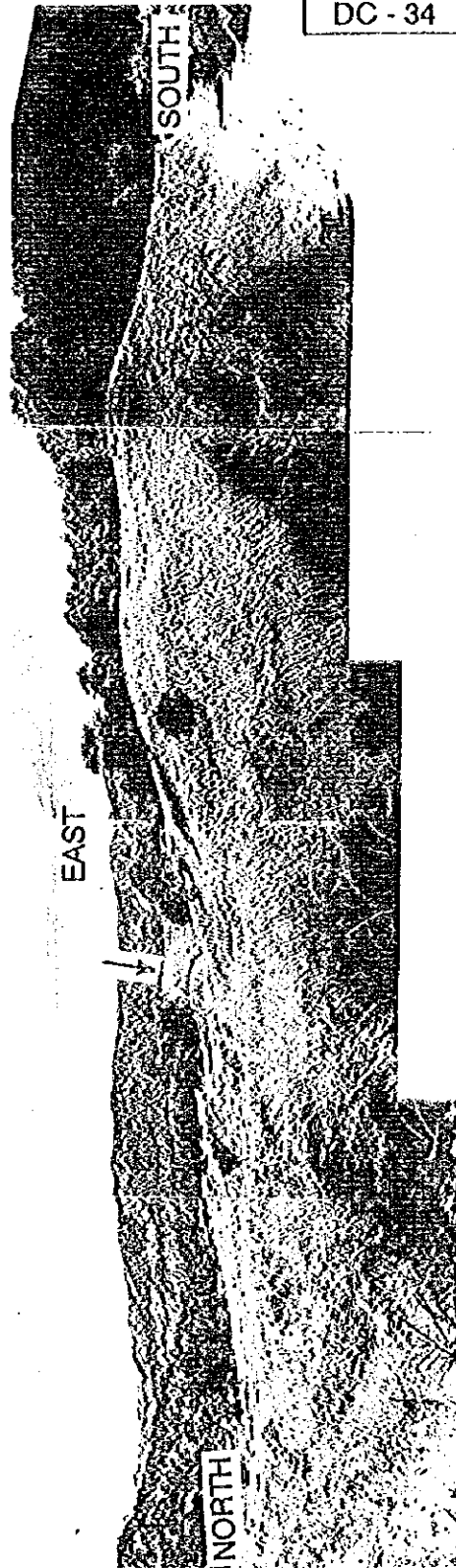
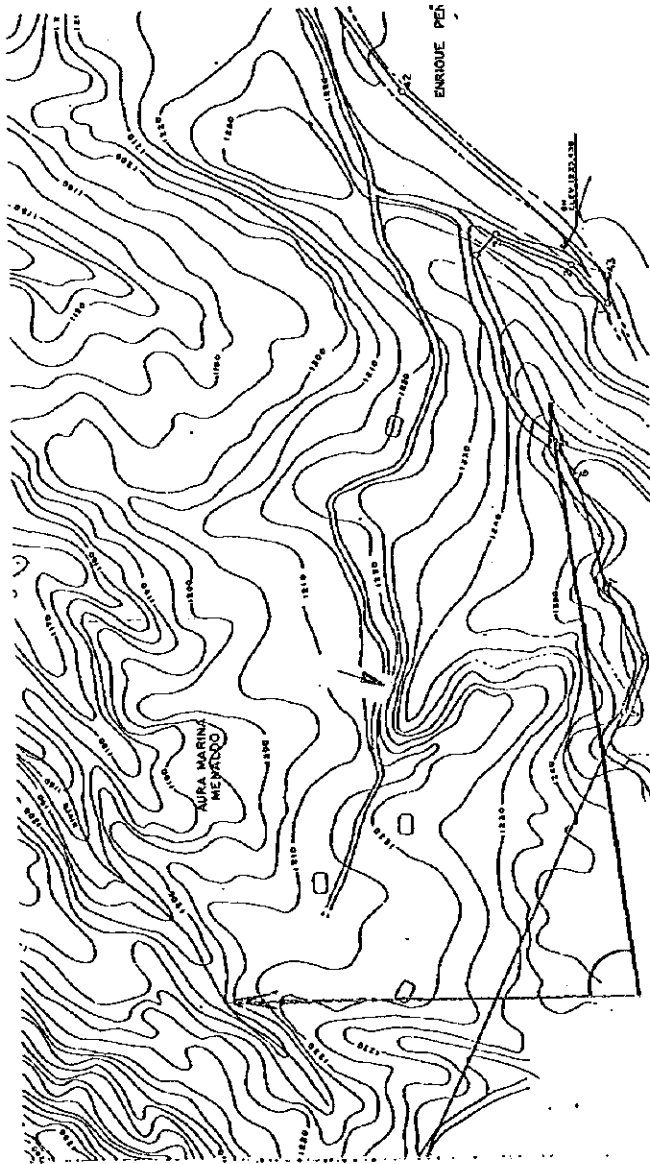
TITLE

PHOTOGRAPHS OF  
BENCH MARKS:  
KKK-4 AND IAP-7

**DC 5 Photographs of WWTP Sites**

DC - 24 Photographs of Central WWTP Site

DC - 35 Photographs of South 3 WWTP Site



THE REPUBLIC OF GUATEMALA  
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THE STUDY ON  
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TITLE  
CENTRAL WWTP SITE

DC - 35

SOUTH

EAST

THE REPUBLIC OF GUATEMALA

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TITLE

SOUTH 3 WWTP SITE

DC - 40









JICA