US ARMY CORPS OF ENGINEERS
JACKSONVILLE DISTRICT

SAFETY ON THIS JOB DEPENDS ON YOU

DRILLING LOG — Hole No. CB-S79-22

DEPARTMENT OF THE ARMY
Division: Corps of Engineers
Installation: Jacksonville, Florida

1. Project: C&SF - Structure 79 — Sheet 1 of 2
2. Location: x= 599,888 y= 867,965
3. Drilling Agency: Corps of Engineers
4. Hole No.: CB-S79-22
5. Name of Driller: J. D. King
6. Direction of Hole: [X] Vertical [ ] Inclined
9. Total Depth of Hole: 80.7
10. Size and Type of Bit: 2" I.D. spoon - see remarks
11. Datum for Elevation Shown: MSL
12. Manufacturer's Designation of Drill: Sprague & Henwood 142
14. Total No. Core Boxes: 1
15. Elev. Ground Water: +3.4
16. Date Hole: Started 10/16/61 — Completed 10/17/61
17. Elev. Top of Hole: +5.0
18. Total Core Recovery for Boring (%): 92.1
19. Geologist: K. R. Hess

Elevation	Depth	Classification of Materials
+5.0	0.0	
+3.1	1.9	SAND, fine quartz, light gray, (SP)
+0.3	4.7	SAND, fine quartz, very clayey, light brown, (SC)
-3.2	8.2	SAND, medium quartz, white, clean (SP)
-12.0	17.0	CLAY, calcareous, limestone fragments 5 to 10%, (CL)
-64.0	69.0	CLAY, calcareous, light gray, (CH)
-70.7	75.7	LIMESTONE, medium hard, very clayey, tan
-75.7	80.7	LIMESTONE, hard, very fossiliferous, very permeable, light gray

% Core Recovery	Sample No.	Remarks (Bit & Barrel)	Bls/Ft
40	1, 2	+5.0 to +0.0, 2" I.D. Spoon	1, 1, 2, 5, 8
100	3, 4	+0.0 to -5.0	1?, 20, 20, 12, 13
100	5	-5.0 to -10.0	8?, 2, 2, 3, 12
100	6, 7	-10.0 to -15.0	3, 3, 7, 8, 11
100	8, 9	-15.0 to -20.0	6, 3, 3, 2, 3
100	10, 11	-20.0 to -25.0	1, 1, 8, 14, 10
100	12	-25.0 to -30.0	3, 5, 8, 12, 10
100	13	-30.0 to -35.0	2, 2, 2, 3, 6
100	14	-35.0 to -40.0, 2" I.D. Spoon	1, 2, 1, 1, 3
100	15	-40.0 to -45.0, Settled	2, 2, 3, 7
100	16	-45.0 to -50.0, Settled	[illegible]
100	17	-50.0 to -55.0, Settled	1, 3, 3, 6
100	18	-55.0 to -60.0	1, 1, 2, 3, 5
80	19	-60.0 to -65.0	2, 4, 5, 9
100		-65.0 to -70.0	10, 10, 8, 11, 18
0		-70.0 to -70.7	28
72		-70.7 to -73.2, DIA NX	
68		-73.2 to -75.7	

Artesian flow started at elevation -60.0, maximum flow was 36 GPM, maximum head was at elevation +14.4

300# hammer w/18" drop on a 2" I.D. spoon

ENG FORM 1836 1 JUN 57 (TRANSLUCENT) (EM 1110-2-1801) PREVIOUS EDITIONS ARE OBSOLETE — Project C&SF Structure 79 — Hole No. CB-S79-22

DRILLING LOG — Hole No. CB-S79-23

DEPARTMENT OF THE ARMY
Division: Corps of Engineers
Installation: Jacksonville, Florida

1. Project: Core Borings For S79 — Sheet 1 of 2
2. Location: Sta. Rge. x - 599,790 y - 867,980
3. Drilling Agency: Corps of Engineers
4. Hole No.: CB-S79-23
5. Name of Driller: J. D. King
6. Direction of Hole: [X] Vertical [ ] Inclined
9. Total Depth of Hole: 80.0
10. Size and Type of Bit: 2" I. D. Spoon
11. Datum for Elevation Shown: MSL
12. Manufacturer's Designation of Drill: Sprague and Henwood 142
14. Total No. Core Boxes: 1
15. Elev. Ground Water: +2.8
16. Date Hole: Started 10/11/61 — Completed 10/12/61
17. Elev. Top of Hole: +3.7
18. Total Core Recovery for Boring (%): 93.0
19. Geologist: K. R. Hess

Elevation	Depth	Classification of Materials
+3.7		
-3.3	7.0	SAND, medium to fine quartz, light gray from +0.7 to -3.3, coarse from -1.7 to -3.3. (SP)
-22.1	25.8	CLAY, calcareous, light grey to white small limestone fragments 3 to 5%. (CL)
-27.6	31.3	SAND, fine quartz, streak of medium to hard limestone from -24.3 to -24.9, very clayey (SC).
-61.7	65.4	CLAY, slightly sandy, calcareous, light gray, light olive green from -30.8 to -66.7 (CH)
-64.3	68.0	SAND, fine quartz, very clayey. Light olive green (SC) Limestone fragments 10/20% from -63.3 to -64.3
-66.7	70.4	LIMESTONE, medium hard, very clayey, slightly sandy
-68.8	72.5	SAND, medium to fine, very clayey, shelly, white, Limestone fragments 5 to 10% (SC)
-76.3		LIMESTONE, hard, very permeable, tan to light gray, fossiliferous, very dense and white from -74.2 to -75.3

% Core Recovery	Sample No.	Remarks (Bit & Barrel)	Bls/Ft
40	1	+3.7 to -1.3	1, 1, 3, 6, 23
100	2, 3	-1.3 to -6.3	3, 9, 4, 6, 10
100	4	-6.3 to -11.3	2, 3, 3, 4, 6
100	5, 6	-11.3 to -16.3	1, 4, 3, 6, 10
100	7, 8	-16.3 to -21.3	1, 1, 3, 3, 5
100	9	-21.3 to -26.3	1, 3, 8, 10, 9
100	10, 11	-26.3 to -31.3	2, 3, 6, 7, 10
100	12	-31.3 to -36.3	2, 2, 5, 6, 11
100	13	-36.3 to -41.3	1, 2, 4, 3, 4
100	14	-41.3 to -46.3	1, 2, 1, 3, 4
100	15	-46.3 to -51.3	2, 1, 1/2, 1/2, 3
100	16	-51.3 to -56.3, Settled	3, 4, 5
100	17	-56.3 to -61.3	1, 1, 2, 3, 5
100	18	-61.3 to -66.3	2, 6, 8, 11, 10
100	19	-66.3 to -68.8	12, 4, 60
48		-68.8 to -71.3, DIA NX	
44		-71.3 to -73.8, DIA NX	
74		-73.8 to -76.3, DIA NX	

300 # hammer with 18 " drop used on 2-inch I.D. Spoon

ENG FORM 1836 1 JUN 57 (TRANSLUCENT) (EM 1110-2-1801) PREVIOUS EDITIONS ARE OBSOLETE — Project Core Borings for S79 — Hole No. 23

DRILLING LOG — Hole No. CB-S79-24

DEPARTMENT OF THE ARMY
Division: Corps of Engineers
Installation: Jacksonville, Florida

1. Project: C&SF - Structure 79 — Sheet 1 of 2
2. Location: Sta. Rge. x- 599,691 y- 867,995
3. Drilling Agency: Corps of Engineers
4. Hole No.: CB-S79-24
5. Name of Driller: J. D. King
6. Direction of Hole: [X] Vertical [ ] Inclined
9. Total Depth of Hole: 79.3'
10. Size and Type of Bit: A 2" I. D. Spoon
11. Datum for Elevation Shown: MSL
12. Manufacturer's Designation of Drill: Sprague and Henwood
14. Total No. Core Boxes: 1
15. Elev. Ground Water: +2.8
16. Date Hole: Started 10/9/61 — Completed 10/13/61
17. Elev. Top of Hole: +4.0
18. Total Core Recovery for Boring (%): 90.9
19. Geologist: K. R. Hess

Elevation	Depth	Classification of Materials
+4.0	0.0	
-0.3	4.3	SAND, fine quartz, very clayey dark brown ligt gray from +1.8 to -0.3(SC)
-4.0	8.0	SAND, medium quartz, white (SP)
-22.0	26.0	CLAY, calcareous, white limestone fragments 10/20%. (CL)
-26.7	30.7	SAND, fine quartz, very clayey (SC)
-62.0	66.0	CLAY, calcareous, light olive green, slightly sandy (CH)
-64.8	68.8	SAND, fine quartz, very clayey. Light olive green, (SC). Limestone fragments 10/20%
-68.5	72.5	LIMESTONE, medium hard, very clayey, sandy
-75.3	79.3	LIMESTONE, hard, very fossiliferous, light gray soft from -69.3 to -69.7, very dense, white from -73.8 to -74.7

% Core Recovery	Sample No.	Remarks (Bit & Barrel)	Bls/Ft
33	1, 2	+4.0 to -1.0	1, 1, 1, 6, 14
100	4	-1.0 to -6.0	8, 9, 11, 6, 9
100	5	-6.0 to -11.0	1, 2, 4, 6, 7
100	6, 7	-11.0 to -16.0	2, 3, 4, 7, 10
100	8	-16.0 to -21.0, Settled	2, 2, 4, 3
100	9	-21.0 to -26.0	1, 4, 6, 5, 7
100	10	-26.0 to -31.0	4, 4, 6, 5, 6
100	11	-31.0 to -36.0	1, 2, 2, 3, 6
100	12	-36.0 to -41.0	1, 2, 3, 4, 4
100	13	-41.0 to -46.0	1, 2, 3, 4, 6
100	14	-46.0 to -51.0, Settled	3, 2, 4, 4
100	15	-51.0 to -56.0	2, 2, 3, 4, 5
100	16	-56.0	1, 1, 2, 3, 4, 2
100	17	to -66.0	3, 10, 12, 24
100		-66.0 to -68.5	9, 6, 24
61		-68.5 to -69.8, DIA NX	
62		-69.8 to -72.3, DIA NX	
63		-72.3 to -75.3, DIA NX	

Artesian flow began at -65.0. Maximum flow was 16 GPM; maximum head maintained was 7.9 feet.

300# Hammer w/18" Drop Used on 2" I.D. Spoon

ENG FORM 1836 1 JUN 57 (TRANSLUCENT) (EM 1110-2-1801) PREVIOUS EDITIONS ARE OBSOLETE — Project C&SF-Structure 79 — Hole No. 24

DRILLING LOG — Hole No. CB-S79-25

DEPARTMENT OF THE ARMY
Division: Corps of Engineers
Installation: Jacksonville, Florida

1. Project: C&SF Structure 79 — Sheet 1 of 2
2. Location: x= 599,592 y= 868,010
3. Drilling Agency: Corps of Engineers
4. Hole No.: CB-S79-25
5. Name of Driller: J. D. King
6. Direction of Hole: [X] Vertical [ ] Inclined
9. Total Depth of Hole: 79.0
10. Size and Type of Bit: 2" I.D. Spoon-see remarks
11. Datum for Elevation Shown: MSL
12. Manufacturer's Designation of Drill: Sprague & Henwood 142
14. Total No. Core Boxes: 1
15. Elev. Ground Water: +3.4
16. Date Hole: Started 10/19/61 — Completed 10/19/61
17. Elev. Top of Hole: +4.1
18. Total Core Recovery for Boring (%): 93.7
19. Geologist: K. R. Hess

Elevation	Depth	Classification of Materials
+4.1	0.0	
+2.3	1.8	SAND, dark gray, fine quartz (SP)
-2.0	6.1	CLAY, dark brown, very sandy (fine quartz), stiff (CL)
-6.6	10.7	SAND, coarse quartz, white (SP)
-14.0	18.1	CLAY, calcareous, limestone fragments, sandy from -7.5 to -12.3 (CL)
-62.9	67.0	CLAY, Calcareous, light gray (CH) Very sandy from -24.5 to -25.9. Light olive green from -25.9 to -62.9. Very sandy from -61.3 to -62.9
-64.3	68.4	SAND, fine quartz, very clayey, (calc), light olive green (SC)
-69.9	74.0	LIMESTONE, medium-hard, very clayey (calcareous), slightly sandy (fine quartz). Very sandy from -66.9 to -67.9
-74.9	79.0	LIMESTONE, hard, very fossiliferous, very permeable, light gray

% Core Recovery	Sample No.	Remarks (Bit & Barrel)	Bls/Ft
48	1, 2	+4.1 to -0.9, 2" ID Spoon	1, 2, 2, 2, 2
100	3, 4	-0.9 to -5.9	9, 20, 31, 45, 42
100	5	-5.9 to -10.9	5, 4, 3, 5, 8
100	6, 7	-10.9 to -15.9	2, 4, 4, 7, 8
73	8	-15.9 to -20.9, Settled	2, 2, 3, 4
100	9	-20.9 to -25.9	4, 7, 4, 6, 10
100	10	-25.9 to -30.9	4, 5, 5, 7, 8
100	11	-30.9 to -35.9	1, 2, 1, 2, 5
100	12	-35.9 to -40.9, 2" I.D. Spoon	1, 2, 1, 2, 4
100	13	-40.9 to -45.9, Settled	2, 2, 5
100	14	-45.9 to -50.9, Settled	1, 2, 3, 5
100	15	-50.9 to -55.9, Pushed	3, 4, 5
100	16	-55.9 to -60.9, Pushed	3, 3, 4, 6
100	17, 18	-60.9 to -65.9	3, 3, 9, 10, 13
100		-65.9 to -69.9	9, 5, 15, 10
60		-69.9 to -72.4, DIA NX	
60		-72.4 to -74.9	

Artesian flow started at Elev -60.9, Maximum flow was 18GPM, Maximum head was at +14.3

300# hammer with 18" drop used on 2"-I.D. Spoon

ENG FORM 1836 1 JUN 57 (TRANSLUCENT) (EM 1110-2-1801) PREVIOUS EDITIONS ARE OBSOLETE — Project C&SF Structure 79 — Hole No. CB-S79 25

DRILLING LOG — Hole No. CB-S79-26

DEPARTMENT OF THE ARMY
Division: Corps of Engineers
Installation: Jacksonville, Florida

1. Project: C&SF Structure 79 — Sheet 1 of 2
2. Location: x= 599,493 y= 868,026
3. Drilling Agency: Corps of Engineers
4. Hole No.: CB-S79-26
5. Name of Driller: J. D. King
6. Direction of Hole: [X] Vertical [ ] Inclined
9. Total Depth of Hole: 78.7
10. Size and Type of Bit: 2" I. D. Spoon (see remarks)
11. Datum for Elevation Shown: MSL
12. Manufacturer's Designation of Drill: Sprague & Henwood 142
14. Total No. Core Boxes: 1
15. Elev. Ground Water: +3.4
16. Date Hole: Started 10/20/61 — Completed 10/20/61
17. Elev. Top of Hole: +4.4
18. Total Core Recovery for Boring (%): 88.2
19. Geologist: K. R. Hess

Elevation	Depth	Classification of Materials
+4.4	0.0	
-6.6	11.0	SAND - fine quartz to -1.7, coarse from -1.7 to -6.6, gray to light gray (SP)
-13.6	18.0	CLAY - stiff, limestone fragments 5% to 10%, light gray (CL) calcareous
-62.4	67.8	CLAY - calcareous light gray (CH) Very sandy, from -21.8 to -30.6. Light olive green from -27.0 to -30.6
-64.6	69.0	SAND, fine quartz, very clayey (calcareous) light olive green (SC)
-68.8	73.2	LIMESTONE, medium-hard, very clayey (calcareous) slightly sandy (fine quartz)
-74.3	78.7	LIMESTONE, hard, very fossiliferous, light gray

% Core Recovery	Sample No.	Remarks (Bit & Barrel)	Bbls/Ft
55	1	+4.4 to -0.6, 2" I.D. Spoon	1, 1, 1, 6, 8
100	2	-0.6 to -5.6	5, 18, 27, 30, 32
73	3, 4	-5.6 to -10.6	8, 6, 7, 7, 10
100	5, 6	-10.6 to -15.6	4, 4, 6, 9, 9
80	7	-15.6 to -20.6, Settled	1, 3, 6, 9
100	8	-20.6 to -25.6, Settled	5, 7, 4, 6
100	9	-25.6 to -30.6	2, 7, 7, 8, 12
100	10	-30.6 to -35.6	1, 2, 2, 3, 5
100	11	-35.6 to -40.6, 2" I.D. Spoon Settled	1, 1, 2, 4
100	12	-40.6 to -45.6	1, 1, 2, 2, 5
100	13	-45.6 to -50.6	2, 2, 2, 3, 5
100	14	-50.6 to -55.6	1, 1, 2, 3, 4
100	15	-55.6 to -60.6	2, 2, 4, 4, 6
100	16	-60.6 to -65.6	1, 3, 5, 6, 11
63		-65.6 to -68.8	17, 15, 8
22		-68.8 to -71.3, DIA N X	
50		-71.3 to -74.3, DIA N X	

Artesian flow started at elev. -60.6, water rose to elev. +13.5 in casing.

300# hammer w/18" drop on 2" I.D. Spoon.

ENG FORM 1836 1 JUN 57 (TRANSLUCENT) (EM 1110-2-1801) PREVIOUS EDITIONS ARE OBSOLETE — Project C&SF Structure 79 — Hole No. CB-S79 26

RECORD DRAWING: "Shall be," "provide," "install," "Remove," etc., indicates work was accomplished under the contract

NOTE: For location of Core Borings see sheet No: 9

AS BUILT

REVISION	DATE	DESCRIPTION	BY

U. S. ARMY ENGINEER DISTRICT, JACKSONVILLE
CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

CENTRAL AND SOUTHERN FLORIDA PROJECT
FOR FLOOD CONTROL AND OTHER PURPOSES

STRUCTURE 79

LOG OF BORINGS CB-S-79-22,23,24,25 & 26

Drawn by: — Traced by: — Checked by: R.G.T.
Prepared by: Victor E. Muse, Chief, Foundations, Sec.
Submitted by: [signature], Chief, F. & Materials Branch
Approval recommended: [signature], Chief, Engineering Division
Approved: [signature], Col. C.E., District Engineer — 21 MAR. 1962 (Dated)
To accompany invitation No. CIV. ENG. 08-123-62-44 Dated: 2 APRIL 1962
SCALE — SHEET 8 OF 98 — D.O. FILE NO ~~471-27,606-8~~

No.	Symbol	Zone	Description	Approved
1	A	ALL	REVISED TO ACCOMPANY AMENDMENT NO. 0001	

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

URS
URS GROUP INC.
7650 WEST COURTNEY
CAMPBELL CAUSEWAY
TAMPA, FL 33607-1462
NO. 00000002

Designed by: — Dwn by: — Ckd by: — Inv. No. DACW17-02-B-0007 — Dated: — Scale: AS SHOWN — Plot date: — Plot scale:

DATED: AUG 2001
D.O.FILE NO471-38,227

File name: 15-3.DGN
Reference files: G-BRDR01.DGN

CENTRAL AND SOUTHERN FLORIDA PROJECT
FOR FLOOD CONTROL AND OTHER PURPOSES
REPLACEMENT OF TIMBER GUIDE WALLS AT W.P. FRANKLIN LOCK
STRUCTURE S-79
STRUCTURE S-79 (AS BUILT)
LOG OF BORINGS CB-S-79- 22,23,24,25&26

DRAWING NO. 15/3

.../contract/15-3.dgn 06/20/2002 11:17:16 AM