APPENDIX B

Topographic Survey of Existing Site Conditions

VICINITY MAP

LEGEND

CIRF	INDICATES CAPPED IRON PIN FOUND
CIPS	INDICATES CAPPED 5/8" IRON PIN SET
CTOF	INDICATES CRIMPED TOP IRON PIN FOUND
OTOF	INDICATES OPEN TOP IRON PIN FOUND
REBAR	INDICATES REBAR FOUND
CMF	INDICATES CONCRETE MONUMENT FOUND
PP	INDICATES POWER POLE
GP	INDICATES GUY POLE
GUY	INDICATES GUY WIRE
OHE	INDICATES OVERHEAD ELECTRIC
UGE	INDICATES UNDERGROUND ELECTRIC
LP	INDICATES LIGHT POLE
MP	INDICATES METER POLE
PB	INDICATES POWER BOX
	INDICATES WOODEN FENCE
	INDICATES CHAIN LINK FENCE
	INDICATES WIRE FENCE
TP	INDICATES TELEPHONE PEDESTAL
T T	INDICATES O/H TELEPHONE LINE
UTIL	INDICATES UNKNOWN UTILITY
FOCM	INDICATES FIBER OPTIC MARKER
	INDICATES STORM WATER MANHOLE
GM	INDICATES GAS METER
GV	INDICATES GAS VALVE
G G	INDICATES GAS LINE
GLM	INDICATES GAS LINE MARKER
FH	INDICATES FIRE HYDRANT
WM	INDICATES WATER METER
WV	INDICATES WATER VALVE
W	INDICATES WATER LINE
SS	INDICATES SANITARY SEWER MANHOLE
SS	INDICATES SANITARY SEWER LINE
C.O.	INDICATES CLEAN OUT
SV	INDICATES SEWER VALVE
CP	INDICATES CABLE PEDESTAL
BP	INDICATES BUMPER POST
DI	DUCTILE IRON PIPE
RCP	REINFORCED CONCRETE PIPE
BPP	BLACK PLASTIC PIPE
MB	INDICATES MAIL BOX
FO	INDICATES UNDERGROUND FIBER OPTIC CABLE
	INDICATES GROUND FLOOD LIGHTS
	INDICATES VEGETATION
HDPE	INDICATES ABOVE GROUND HIGH DENSITY POLYETHYLENE PIPE

SURVEY NOTES:

1.) TYPE OF SURVEY: TOPOGRAPHIC.
THE CONTOURS REPRESENTED ARE REFERENCED TO LIDAR DATA COLLECTED BY A MICRODRONES MD4-1000LIDAR AND RTK GPS DIALED TO HPRTK NETWORK OF CONTINUOUS OPERATING REFERENCE STATIONS. NO IMPROVEMENTS LOCATED EXCEPT THOSE SHOWN.
2.) BEARING BASIS: ALL COORDINATES AND POSITIONS ARE REFERENCE GEORGIA STATE PLANE, WEST ZONE. ALL ELEVATIONS ARE REFERENCED TO NAVD 1988 DATUM. ALL WAS ESTABLISHED USING RTK GPS DIALED TO HPRTK NETWORK OF CONTINUOUS OPERATING REFERENCE STATION USING GEOID 2018.
3.) FIELD DATES: DECEMBER 13, 2021 – MARCH 13, 2022.
4.) NO ATTEMPT WAS MADE BY THE SURVEYOR TO LOCATE UNDERGROUND IMPROVEMENTS OR ENVIRONMENTALLY SENSITIVE CONDITIONS.

GENERAL NOTE:

1. PERMITTING SITE BOUNDARY, 200 FT SITE BUFFER, PROPOSED LIMIT OF WASTE, AND EXISTING LIMIT OF WASTE WAS PROVIDED BY HODGES, HARBIN, NEWBERRY & TRIBBLE, INC BY WAY OF GEOSYNTEC CONSULTANTS, INC.

2. WETLAND, STREAM, AND DRAINAGE AREAS WAS PROVIDED BY ECOLOGICAL SOLUTIONS, INC BY WAY OF GEOSYNTEC CONSULTANTS, INC.

3. TOPOGRAPHIC SURVEY SHOWN HEREON IS FROM A DRAWING DONE BY THOMPSON ENGINEERING ON MARCH 13TH OF 2022 AND MAY NOT REFLECT THE CURRENT SITE CONDITIONS.

I, THE UNDERSIGNED PROFESSIONAL ENGINEER CERTIFIES THAT THIS MAP COMPLIES WITH THE MINIMUM TECHNICAL STANDARDS FOR TOPOGRAPHIC SURVEYS IN GEORGIA AS SET FORTH IN THE RULES AND REGULATIONS OF THE GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS.

MATTHEW C. ROGERS P.E.
GEORGIA PE# 46641
THOMPSON ENGINEERING

GEORGIA REGISTERED No. PE46641 PROFESSIONAL MATTHEW C. ROGERS

07/24/2023
DATE

OVERLAY LEGEND

- INDICATES WETLAND AREAS
- INDICATES STREAMS
- INDICATES 25' STREAM MANAGEMENT ZONE
- INDICATES PERMITTED SITE BOUNDARY
- INDICATES 200 FT SITE BUFFER
- INDICATES EXISTING LIMITS OF WASTE
- INDICATES APPROXIMATE LIMITS OF PROPOSED CELL 4 DEVELOPMENT

REVISION NO.	DESCRIPTION	DATE	BY:
1	UPDATED BOUNDARY LINES	06/01/2023	JBB
2	ADDRESSING COMMENTS	06/06/2023	JBB
3	ADDRESSING COMMENTS	06/09/2023	JBB
REVISION NO.	DESCRIPTION	DATE	BY:
REVISION NO.	DESCRIPTION	DATE	BY:
REVISION NO.	DESCRIPTION	DATE	BY:

GEOSYNTEC
1371 LIBERTY CHURCH RD, CARROLLTON, GA 30116

thompson ENGINEERING
2970 COTTAGE HILL RD., STE. 190
MOBILE, ALABAMA 36606
TEL: (251) 666-2443
FAX: (251) 666-6422

SCALE:	DRAWN BY:	CHECKED BY:	DATE:
1" = 200'	JBB	RAT	4/14/2023

JOB NO. : 22-1102-0003

DRAWING NO. WANSLEY TOPO WITH OVERLAYS 2023.DWG

LANDFILL TOPO W/OVERLAYS

TOPOGRAPHIC SURVEY

Drawing name: P:\2022\Projects\1102\22-1102-0003 Geosyntec PE Wansley Land Fill Sur Drill\Working\Survey\Wansley Topo With Overlays 2023 Updated 20230606.dwg Plotted on: Jun 09, 2023 - 3:27pm

APPENDIX C

Ecological Solutions Survey

630 Colonial Park Drive
Suite 200
Roswell, Georgia 30075
P 770.998.7848 • F 770.998.5606
www.ecologicalsolutions.net

E-MAIL MEMORANDUM

Date: May 25, 2022

To: Paul Jones, Georgia Power Company

From: Sean Eagan, Ecological Solutions, Inc.

Re: Plant Wansley Landfill Area Figures Initial Findings Memo

---

Ecological Solutions staff have conducted multiple ecology field surveys within various area at Plant Wansley. Field surveys were conducted to assess the presence and location of jurisdictional wetlands/waters regulated by the U.S. Army Corps of Engineers (USACE), State Waters potentially requiring a buffer, and the potential presence of protected species. As requested, Ecological Solutions prepared a brief findings summary to identify jurisdictional features, State Waters requiring a buffer, structures within or near wetlands and/or state buffers, and other potential issues associated with the project.

At the request of Georgia Power Company Staff (GPC), data was combined from multiple previous field survey data sets. The previous surveys include the October 2018, February 2021, and March 2021 field studies. When combined the total survey area totals approximately 1,225 acres. The focus of this findings memorandum is field efforts conducted in February 2021, and March 2022, which focused on areas adjacent to the existing gypsum landfill at Plant Wansley. This portion of the survey area is bounded by an existing transmission line easement to the north and east and Hollingsworth Ferry Road to the west, south and southeast.

Jurisdictional Features

Streams:

A total of twenty-six jurisdictional stream features were identified during the field survey and include the following:

- Seven ephemeral streams (Ephemeral Stream 05, 08, 11, 13, 15, 19, 20),
- Fourteen intermittent streams (Intermittent Stream 10, 12, 14, 16, 18, 19, 20, 21, 22-27),
- Five perennial streams (Perennial Stream 09-13).

Wetlands:

A total of eighteen wetland systems (Wetland 05, 07, 09, 11, 13-22, and 24-27) were identified within the survey area. The majority of the wetlands consist of forested and/or scrub-shrub systems; however, some emergent systems were identified within the survey area. The emergent features were limited to open water edges.

Open Waters:

Two jurisdictional open waters (Open Water 05 - 06) were identified within the survey area.

Non-Jurisdictional Features

Nine non-jurisdictional drainage features were identified during the field survey. These include Drainage Features 14, 18, 20, 23, 32, 35, 37-39. These features lack required indicators of jurisdictional waters (streams) including an ordinary high-water mark (OHWM) or bed and banks. These features are likely remnant erosional scars and do not exhibit indicators of ground-water contribution or an OHWM. Given the absence of indicators such as an OHWM or bed and banks and their drainage association within the ash pond watershed, these features were determined to be non-jurisdictional.

State Waters Requiring a Buffer

Twenty-one State Waters requiring a buffer were identified within the survey area, and include all intermittent streams, perennial streams, and open waters.

Protected Species

Federal:

An EDGES (Effects Determination Guidance for Endangered and Threatened Species) was conducted for this specific area. A review of the United States Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) indicates that the federally listed candidate species monarch butterfly (*Danaus plexippus*) could potentially occur in the project vicinity.

The survey area is predominantly forested and does not provide potential foraging habitat for this species; however, the adjacent, maintained transmission lines do provide habitat for this species.

State:

A review of the Georgia Natural, Archeological, and Historic Resources GIS online database indicates that the state threatened bald eagle (*Haliaeetus leucocephalus*) and state threatened bay star-vine (*Schisandra glabra*) have been observed within a three-mile radius of the survey area. No federal listed species were documented as occurring within a 3-mile radius of the survey area.

Bald eagle nesting activity is concentrated mostly along major rivers, wetlands, and reservoirs in the southern and central parts of the state. The nest is usually in a large, open-topped pine near open water, often on high ground if available. No nests or bald eagles were observed during the field survey. Mature trees within the survey area are unlikely to serve as roost trees as they are not adjacent to any large open waters or rivers. The Chattahoochee River (approximately 0.3-mile east of the survey area) and an ash pond at Plant Wansley (approximately 0.4-mile north of the survey area) are the nearest large waterways. A bald eagle nest was historically known from the ash pond area but was abandoned approximately 10 years ago with no nesting activity occurring in the area since.

Bay star-vine habitat is mesic woods with understory trees, usually in bottomlands or in the bluffs along creeks and rivers generally on rich sandy-silt-loams. According to the United States Department of Agriculture Natural Resource Conservation Service (USDA NRCS) soil survey, soils near bottomland streams have either fine-sandy loam or sandy-clay loam. Potential habitat for this state listed species is present within the survey area; however, no specimens were recorded during the survey, and it is not anticipated that project activities will impact this species. It should be noted that ecology surveys were conducted within much of the survey area in association with permitting for the gypsum landfill and no bay star-vine specimens were observed during those surveys.

The survey area also provides habitat for two state-listed aquatic species, blue stripe shiner (*Cyprinella callitaenia*) and highscale shiner (*Notropis hypsilepis*), known from Carroll and Heard counties. Habitat for the state-listed aquatic species is located within the larger streams identified in the survey area however no known occurrence has been recorded within a three-mile area of the surveyed area. No aquatic surveys were conducted in association with the field survey to determine the presence or absence of these species. It is not anticipated project implementation will adversely affect any listed aquatic species.

Superfund Sites

No known underground storage tanks or superfund sites are proximal to the survey area.

Protected Lands

The project corridor is not located within 2,000 feet of a National Wildlife Refuge, National Park Service, National Estuarine Research Reserve, or State Park.

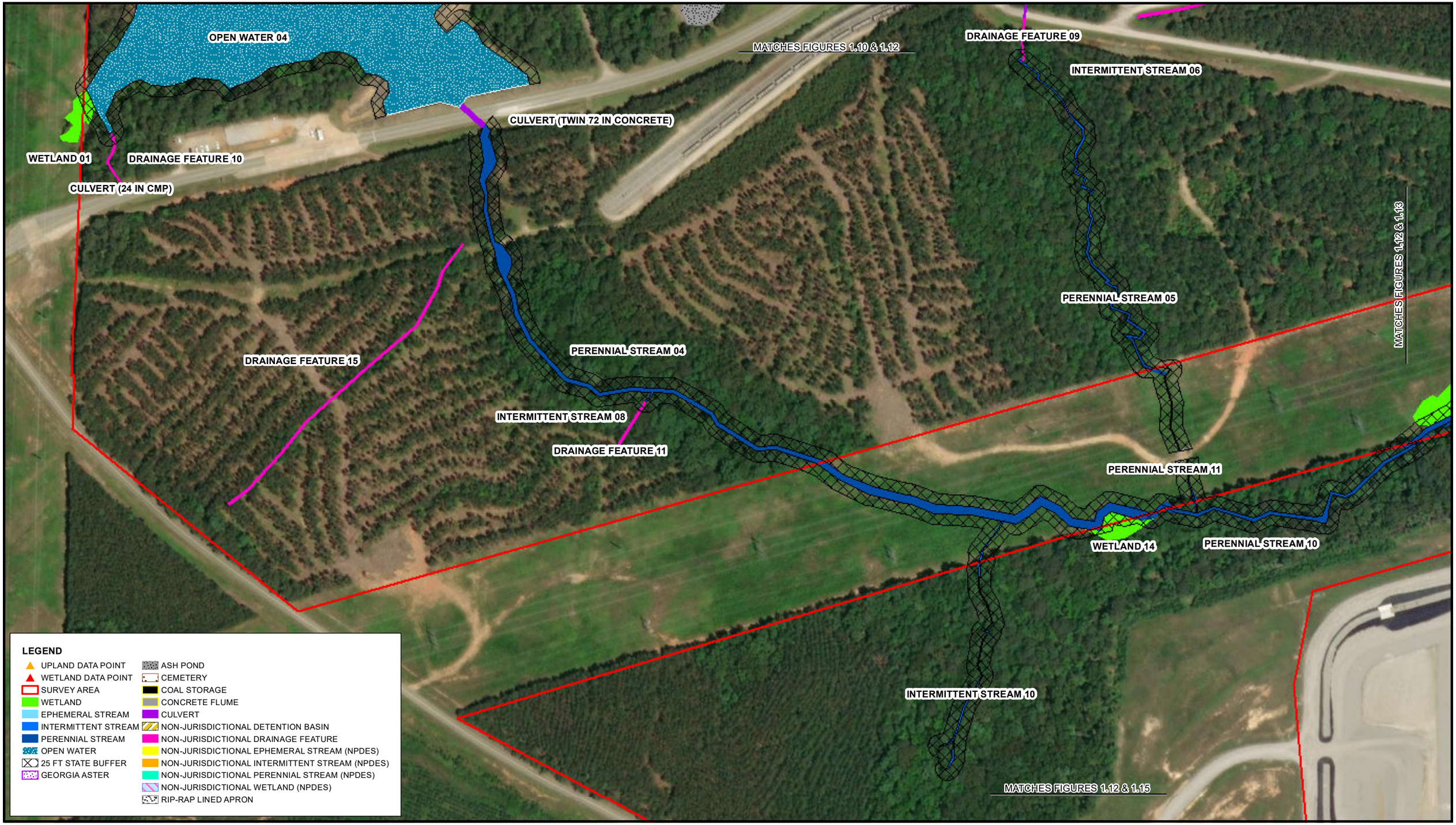
The Bundt Tract Mitigation Bank, which is owned by Georgia Power, is within 2,000 feet of the southern limit of the survey area.

No Section 10 Waters of the US were located within the survey area.

No trout waters were located within or near the survey area.

Other

No other ecological issues were identified by the field team that could potentially hinder project implementation.



Ecological Solutions Inc.

0 125 250 500 Feet

GEORGIA POWER COMPANY
PLANT WANSLEY
HEARD COUNTY, GA

ENVIRONMENTAL SURVEY FINDINGS

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Georgia Power

APRIL 2022
20236-759

FIGURE 1.12

PERENNIAL STREAM 01
MATCHES FIGURES 1.11 & 1.13
INTERMITTENT STREAM 01
CULVERT (60 IN CMP)
EPHEMERAL STREAM 02
CULVERT (60 IN CMP)
DRAINAGE FEATURE 04
CULVERT (36 IN CMP)
WETLAND 02
DRAINAGE FEATURE 04
EPHEMERAL STREAM 07
MATCHES FIGURES 1.12 & 1.13
PERENNIAL STREAM 01
INTERMITTENT STREAM 03
INTERMITTENT STREAM 23
WETLAND 28
PERENNIAL STREAM 12
WETLAND 26
WETLAND 27
WETLAND 16
WETLAND 18
INTERMITTENT STREAM 24
PERENNIAL STREAM 10
WETLAND 25
INTERMITTENT STREAM 21
DRAINAGE FEATURE 32
WETLAND 24
INTERMITTENT STREAM 22
DRAINAGE FEATURE 37
WETLAND 20
WETLAND 22
CULVERT (6 IN PLASTIC)
PERENNIAL STREAM 10
CULVERT (25 FT BOX)
INTERMITTENT STREAM 19
DRAINAGE FEATURE 35
MATCHES FIGURES 1.13 & 1.14
MATCHES FIGURES 1.13 & 1.16
CULVERT (36 IN PLASTIC)

LEGEND

- UPLAND DATA POINT
- WETLAND DATA POINT
- SURVEY AREA
- WETLAND
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- PERENNIAL STREAM
- OPEN WATER
- 25 FT STATE BUFFER
- GEORGIA ASTER
- ASH POND
- CEMETERY
- COAL STORAGE
- CONCRETE FLUME
- CULVERT
- NON-JURISDICTIONAL DETENTION BASIN
- NON-JURISDICTIONAL DRAINAGE FEATURE
- NON-JURISDICTIONAL EPHEMERAL STREAM (NPDES)
- NON-JURISDICTIONAL INTERMITTENT STREAM (NPDES)
- NON-JURISDICTIONAL PERENNIAL STREAM (NPDES)
- NON-JURISDICTIONAL WETLAND (NPDES)
- RIP-RAP LINED APRON

Ecological Solutions Inc.

0 125 250 500 Feet

GEORGIA POWER COMPANY
PLANT WANSLEY
HEARD COUNTY, GA

ENVIRONMENTAL SURVEY FINDINGS

N
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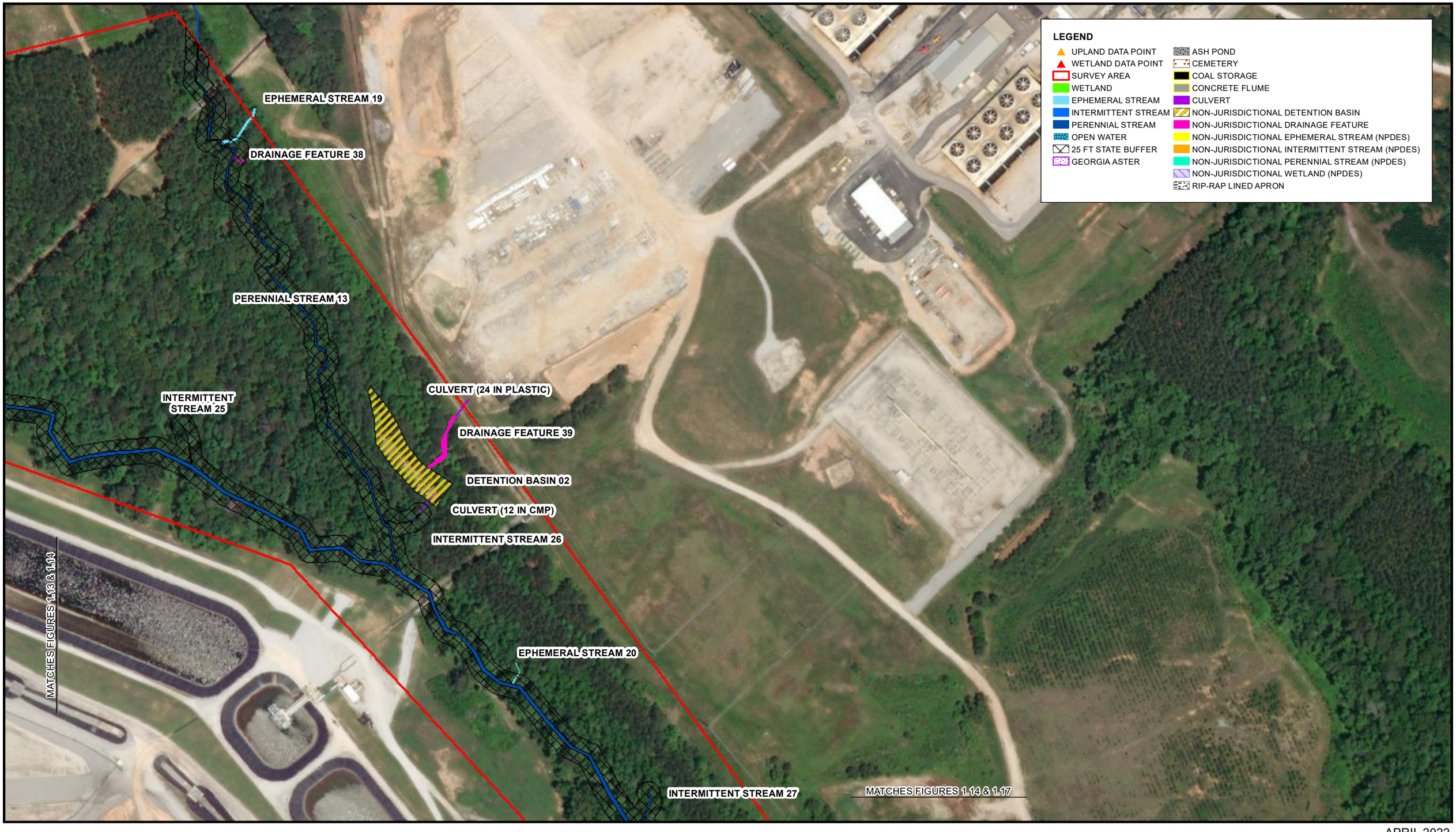
Georgia Power

APRIL 2022
20236-759

FIGURE 1.13



Ecological Solutions Inc.

0 125 250 500 Feet

GEORGIA POWER COMPANY
PLANT WANSLEY
HEARD COUNTY, GA

ENVIRONMENTAL SURVEY FINDINGS

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Georgia Power

APRIL 2022
20236-759

FIGURE 1.14

MATCHES FIGURES 1.12 & 1.15

DRAINAGE FEATURE 14

DRAINAGE FEATURE 23

EPHEMERAL STREAM 05

CULVERT (18 IN CMP)

MATCHES FIGURES 1.15 & 1.16

LEGEND

- UPLAND DATA POINT
- WETLAND DATA POINT
- SURVEY AREA
- WETLAND
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- PERENNIAL STREAM
- OPEN WATER
- 25 FT STATE BUFFER
- GEORGIA ASTER
- ASH POND
- CEMETERY
- COAL STORAGE
- CONCRETE FLUME
- CULVERT
- NON-JURISDICTIONAL DETENTION BASIN
- NON-JURISDICTIONAL DRAINAGE FEATURE
- NON-JURISDICTIONAL EPHEMERAL STREAM (NPDES)
- NON-JURISDICTIONAL INTERMITTENT STREAM (NPDES)
- NON-JURISDICTIONAL PERENNIAL STREAM (NPDES)
- NON-JURISDICTIONAL WETLAND (NPDES)
- RIP-RAP LINED APRON

Ecological Solutions Inc.

0 125 250 500 Feet

GEORGIA POWER COMPANY
PLANT WANSLEY
HEARD COUNTY, GA

ENVIRONMENTAL SURVEY FINDINGS

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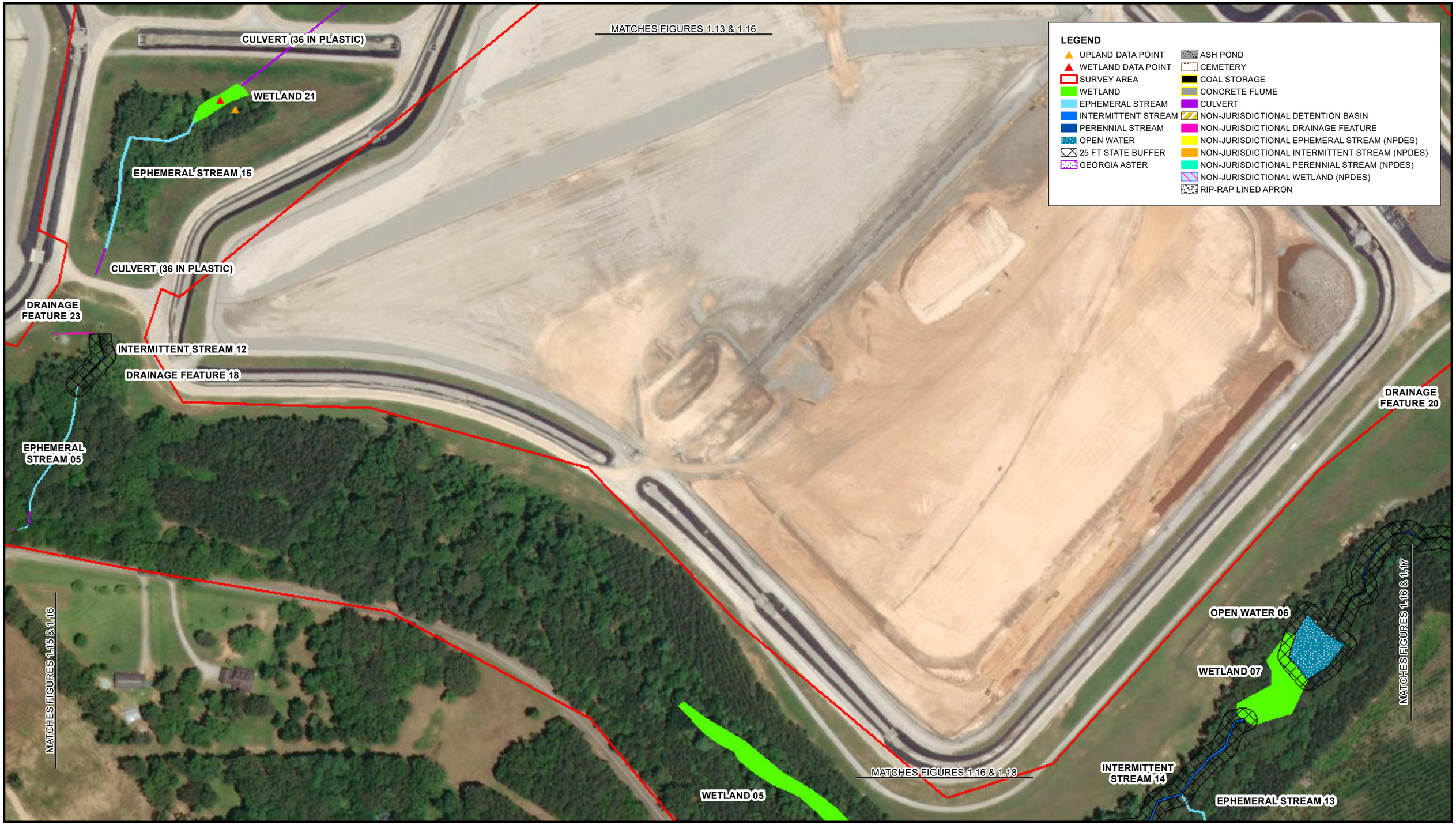
Georgia Power

APRIL 2022
20236-759

FIGURE 1.15



Ecological Solutions Inc.

0 125 250 500 Feet

GEORGIA POWER COMPANY
PLANT WANSLEY
HEARD COUNTY, GA

ENVIRONMENTAL SURVEY FINDINGS

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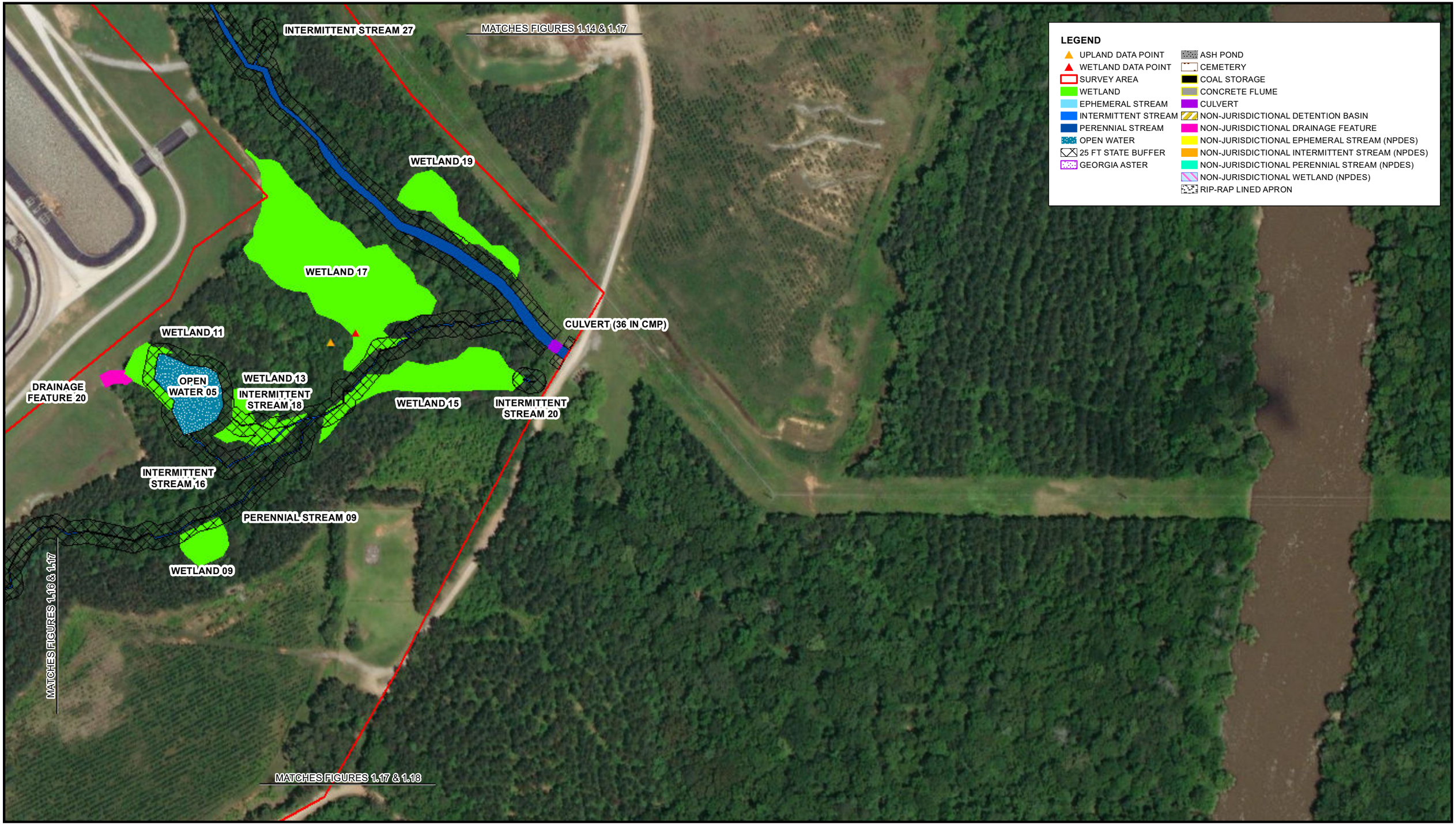
Georgia Power

APRIL 2022
20236-759

FIGURE 1.16



Ecological Solutions Inc.

0 125 250 500 Feet

GEORGIA POWER COMPANY
PLANT WANSLEY
HEARD COUNTY, GA

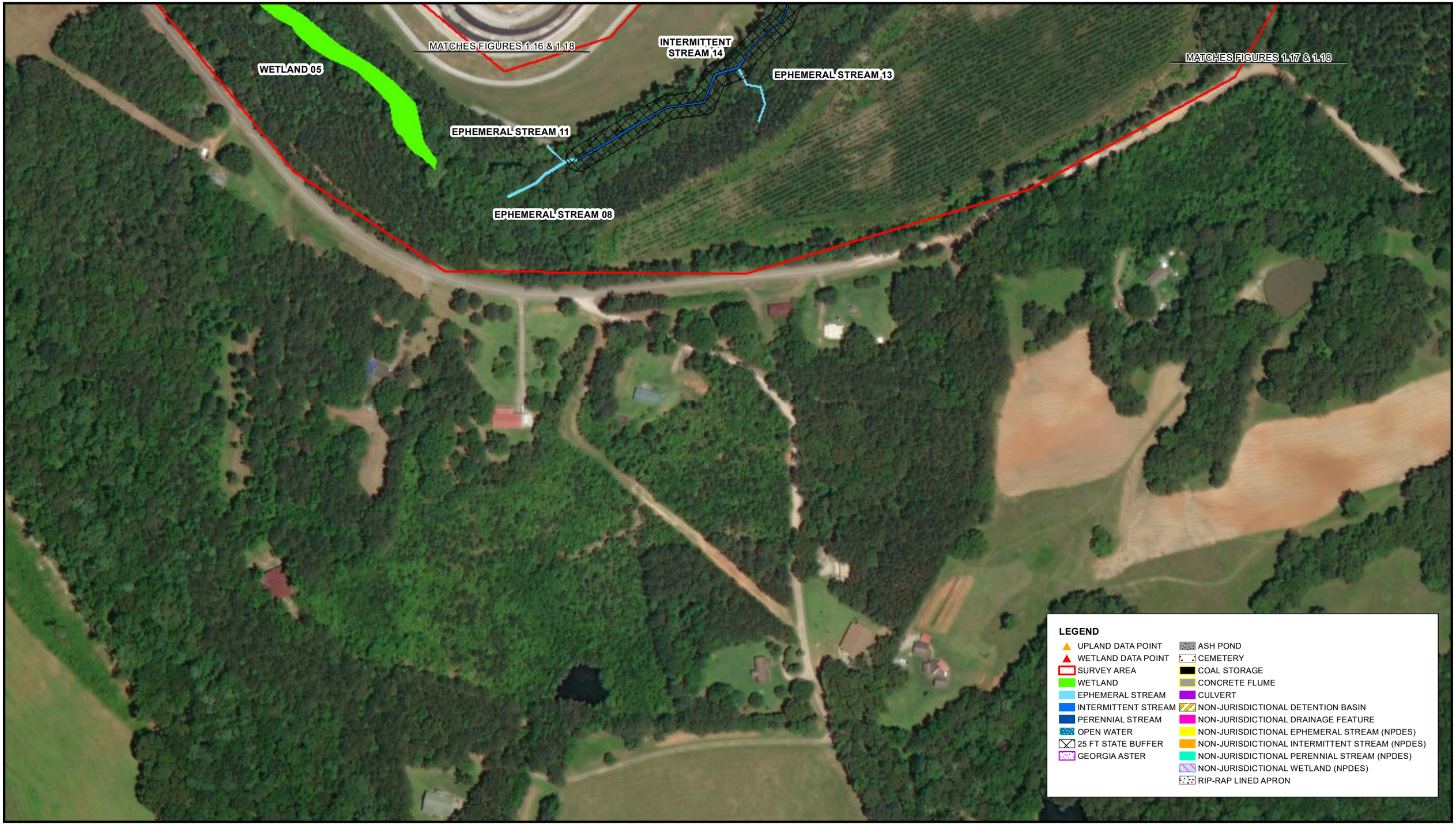
ENVIRONMENTAL SURVEY FINDINGS

N W E S

Georgia Power

APRIL 2022
20236-759

FIGURE 1.17



Ecological Solutions Inc.

0 125 250 500 Feet

GEORGIA POWER COMPANY
PLANT WANSLEY
HEARD COUNTY, GA

ENVIRONMENTAL SURVEY FINDINGS

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Georgia Power

APRIL 2022
20236-759

FIGURE 1.18

APPENDIX D

Zoning Letter

LEE BOONE
Chairman

FELICIA ADAMS
Finance Director

HOPE COLE
COUNTY CLERK

MICHAEL HILL
COUNTY ATTORNEY

HEARD COUNTY COMMISSION
P.O. Box 40
201 Park Avenue, Room 200
Franklin, Georgia 30217

Phone (706) 675-3821 **Fax (706) 675-2493**

BOARD OF COMMISSIONERS

LARRY F. HOOKS
DISTRICT 1
JAMES PERRY
DISTRICT 2
GWEN CALDWELL
DISTRICT 3
LARRY HAMMOND
DISTRICT 4
DAVID R. WALLS
DISTRICT 5

September 19, 2022

Mr. Chuck Mueller
Land Protection Branch Chief
Georgia Environmental Protection Division
2 Martin Luther King Jr. Drive, SE
East Floyd Tower, Suite 1456
Atlanta, GA. 30334-9000

Re: Georgia Power, Plant Wansley CCR Landfill – Proposed Expansion

Dear Mr. Mueller,

The proposed expansion of the Georgia Power Plant Wansley CCR Landfill, located at Plant Wansley in Heard County Georgia complies with local zoning and land use ordinances.

Sincerely,

Lee Boone

Lee Boone, Chairman
Heard County Board of Commissioners

cc: J. Anthony Averett

APPENDIX E

Drillers Bonds

CONTINUATION
CERTIFICATE

SAFECO Insurance Company of America , Surety upon

a certain Bond No. **4993104**

dated effective June 30, 1987
(MONTH-DAY-YEAR)

on behalf of Southern Company Services, Inc.
(PRINCIPAL)

and in favor of Georgia Department of Natural Resources, Environmental Protection Division
(OBLIGEE)

does hereby continue said bond in force for the further period

beginning on June 30, 2021
(MONTH-DAY-YEAR)

and ending on June 30, 2022
(MONTH-DAY-YEAR)

Amount of bond Fifteen Thousand Dollars and 00/100 ($15,000.00)

Description of bond Water Well Contractors & Drillers

Premium: $100.00

PROVIDED: That this continuation certificate does not create a new obligation and is executed upon the express condition and provision that the Surety's liability under said bond and this and all Continuation Certificates issued in connection therewith shall not be cumulative and that the said Surety's aggregate liability under said bond and this and all such Continuation Certificates on account of all defaults committed during the period (regardless of the number of years) said bond had been and shall be in force, shall not in any event exceed the amount of said bond as hereinbefore set forth.

Signed and dated on 05/06/2021
(MONTH-DAY-YEAR)
SAFECO Insurance Company of America
175 Berkeley Street, Boston, MA 02116

By
Attorney-in-Fact Jeffrey M. Wilson, Attorney-in-Fact

McGriff Insurance Services, Inc.
Agent
2211 7th Avenue South, Birmingham, AL 35233
Address of Agent
(205) 252-9871
Telephone Number of Agent

S-0157/GE 8/08

XDP

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual. SURETY

American States Insurance Company
First National Insurance Company of America
General Insurance Company of America
Safeco Insurance Company of America

Certificate No: **8205019-016032**

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American States Insurance Company is a corporation duly organized under the laws of the State of Indiana, that First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America are corporations duly organized under the laws of the State of New Hampshire (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Alisa B. Ferris; Anna Childress; Jeffrey M. Wilson; Mark W. Edwards II; Richard H. Mitchell; Robert R. Freel; Sam Audia; William M. Smith

all of the city of Birmingham state of AL each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 11th day of March, 2021.

American States Insurance Company
First National Insurance Company of America
General Insurance Company of America
Safeco Insurance Company of America

By: David M. Carey
David M. Carey, Assistant Secretary

State of PENNSYLVANIA
County of MONTGOMERY ss

On this 11th day of March, 2021 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of American States Insurance Company, First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.

Commonwealth of Pennsylvania - Notary Seal
Teresa Pastella, Notary Public
Montgomery County
My commission expires March 28, 2025
Commission number 1126044
Member, Pennsylvania Association of Notaries

By: Teresa Pastella
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-law and Authorizations of American States Insurance Company, First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America, which are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS: Section 12. Power of Attorney.
Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorney-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, of American States Insurance Company, First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 6th day of May, 2021.

By: Renee C. Llewellyn
Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

For bond and/or Power of Attorney (POA) verification inquiries, please call 610-832-8240 or email HOSUR@libertymutual.com.

CONTINUATION CERTIFICATE

SAFECO Insurance Company of America , Surety upon

a certain Bond No. **4993104**

dated effective June 30, 1987
(MONTH-DAY-YEAR)

on behalf of Southern Company Services, Inc.
(PRINCIPAL)

and in favor of Georgia Department of Natural Resources, Environmental Protection Division
(OBLIGEE)

does hereby continue said bond in force for the further period

beginning on June 30, 2022
(MONTH-DAY-YEAR)

and ending on June 30, 2023
(MONTH-DAY-YEAR)

Amount of bond Fifteen Thousand Dollars and 00/100 ($15,000.00)

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Premium: $100.00

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Signed and dated on 05/06/2021
(MONTH-DAY-YEAR)

SAFECO Insurance Company of America

175 Berkeley Street, Boston, MA 02116

By
Attorney-in-Fact Jeffrey M. Wilson, Attorney-in-Fact

McGriff Insurance Services, Inc.
Agent

2211 7th Avenue South, Birmingham, AL 35233
Address of Agent

(205) 252-9871
Telephone Number of Agent

S-0157/GE 8/08

XDP

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First National Insurance Company of America
General Insurance Company of America
Safeco Insurance Company of America

Certificate No: **8205019-016032**

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American States Insurance Company is a corporation duly organized under the laws of the State of Indiana, that First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America are corporations duly organized under the laws of the State of New Hampshire (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Alisa B. Ferris; Anna Childress; Jeffrey M. Wilson; Mark W. Edwards II; Richard H. Mitchell; Robert R. Freel; Sam Audia; William M. Smith

all of the city of Birmingham state of AL each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 11th day of March, 2021.

American States Insurance Company
First National Insurance Company of America
General Insurance Company of America
Safeco Insurance Company of America

By: David M. Carey
David M. Carey, Assistant Secretary

State of PENNSYLVANIA
County of MONTGOMERY ss

On this 11th day of March, 2021 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of American States Insurance Company, First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.

Commonwealth of Pennsylvania - Notary Seal
Teresa Pastella, Notary Public
Montgomery County
My commission expires March 28, 2025
Commission number 1126044
Member, Pennsylvania Association of Notaries

By: Teresa Pastella
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-law and Authorizations of American States Insurance Company, First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America, which are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS: Section 12. Power of Attorney.
Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorney-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, of American States Insurance Company, First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 6th day of May, 2021.

By: Renee C. Llewellyn
Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

For bond and/or Power of Attorney (POA) verification inquiries, please call 610-832-8240 or email HOSUR@libertymutual.com.

Bond Number KO8418809

Performance Bond For Water Well Contractors And Drillers

Name of Water Well Contractor or Driller Michael C. Rice dba Boart Longyear Company

Know All Men By These Present.
That we Michael C. Rice dba Boart Longyear Company and any and all Employees, Officers and Partners, as Principal, and Westchester Fire Insurance Company as Surety, are held and firmly bound unto the Director of the Environmental Protection Division (Director), Department of Natural Resources, State of Georgia and his or her Successor or Successors in office, as Obligee, in the full sum of **TWENTY THOUSAND AND NO/OO DOLLARS ($20.000.00)** for the payment of which will and truly to be made, we bind ourselves, our heir, administrators, successors and assigns, jointly and severally, by the present.

WHEREAS, the WATER WELL STANDARDS ACT OF 1985 (Ga. Laws 1985.P 1192) (the "ACT") requires that water well contractors and drillers file performance bonds with the director to ensure compliance with the ACT; and WHEREAS the above bound PRINCIPAL is subject to the terms and provisions of said ACT. NOW, THEREFORE, the conditions of this obligation are such that if the above bound PRINCIPAL shall fully and faithfully perform the duties and in all things comply with the procedures and standards set forth in the ACT as now and hereafter amended, and the rules and regulations promulgated pursuant thereto, including but not limited to the correction of any violation of such procedures and standards upon discovery, irrespective of whether such discovery is made before completion of any well subject to this bond, then this obligation shall be void; otherwise of full force and effect.

And Surety, for value received, agrees that no amendment to existing laws, rules or regulations, or adoption of new laws, rules or regulations shall in anyway discharge its obligation on this bond, and does hereby waive notice of any such amendment, adoption or modification.

This bond shall be effective from date of issuance or, in the case of a water well contractor, date of licensure and shall continue in effect until terminated by expiration, mutual agreement or cancellation upon 60 days written notice to Principal and Obligee; provided that the rights of the obligee and beneficiaries under this bond which arose prior to such termination shall continue.

The bond is effective July 1, 2010 and unless sooner terminated, this bond shall terminate June 30, 2011. In Witness Thereof the Principal and Surety have caused these present to be duly signed and sealed, this 6th day of, July 20 10 .

Michael C. Rice dba Boart Longyear Company

PRINCIPAL, BY _____ (L.S.)

TITLE: Franchise Manager

Westchester Fire Insurance Company

SURETY BY: Cynthia L. Choren

Cynthia L. Choren, Attorney-In-Fact Non-Resident License No. 747470

GEORGIA REGISTERED AGENT N/A SEAL:

ACKNOWLEDGMENT BY SURETY

STATE OF Missouri }
County of St. Charles } ss.

On this 6th day of July, 2010, before me personally appeared Cynthia L. Choren, known to me to be the Attorney-in-Fact of Westchester Fire Insurance Company, the corporation that executed the within instrument, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, at my office in the aforesaid County, the day and year in this certificate first above written.

Debra C. Schneider

Debra C. Schneider
Notary Public in the State of Missouri
County of St. Charles

My Commission Expires: November 5, 2011

(Seal)

DEBRA C. SCHNEIDER
Notary Public/Notary Seal
State of Missouri
St. Charles County
COMMISSION #07419088
My Commission Expires: 11/05/2011

Power of Attorney

WESTCHESTER FIRE INSURANCE COMPANY

Know all men by these presents: That **WESTCHESTER FIRE INSURANCE COMPANY,** a corporation of the State of New York, having its principal office in the City of Atlanta, Georgia pursuant to the following Resolution, adopted by the Board of Directors of the said Company on December 11, 2006, to wit:

"RESOLVED, that the following authorizations relate to the execution, for and on behalf of the Company, of bonds, undertakings, recognizances, contracts and other written commitments of the Company entered into the ordinary course of business (each a "Written Commitment"):

(1) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise.

(2) Each duly appointed attorney-in-fact of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise, to the extent that such action is authorized by the grant of powers provided for in such persons written appointment as such attorney-in-fact.

(3) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to appoint in writing any person the attorney-in-fact of the Company with full power and authority to execute, for and on behalf of the Company, under the seal of the Company or otherwise, such Written Commitments of the Company as may be specified in such written appointment, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.

(4) Each of the Chairman, the President and Vice Presidents of the Company in hereby authorized, for and on behalf of the Company, to delegate in writing any other officer of the Company the authority to execute, for and on behalf of the Company, under the Company's seal or otherwise, such Written Commitments of the Company as are specified in such written delegation, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.

(5) The signature of any officer or other person executing any Written Commitment or appointment or delegation pursuant to this Resolution, and the seal of the Company, may be affixed by facsimile on such Written Commitment or written appointment or delegation.

FURTHER RESOLVED, that the foregoing Resolution shall not be deemed to be an exclusive statement of the powers and authority of officers, employees and other persons to act for and on behalf of the Company, and such Resolution shall not limit or otherwise affect the exercise of any such power or authority otherwise validly granted or vested.

FURTHER RESOLVED, that the Resolution of the Board of Directors of the Company adopted at the meeting held on November 8, 1999 relating to the authorization of certain persons to execute, for and on behalf of the Company, Written Commitments and appointments and delegations, in hereby rescinded.

Does hereby nominate, constitute and appoint Cynthia L Choren, Debra C Schneider, Heidi A Notheisen, JoAnn R Frank, Karen L Roider, Pamela A Beelman, Sandra L Ham, all of the City of SAINT LOUIS, Missouri, each individually if there be more than one named, its true and lawful attorney-in-fact, to make, execute, seal and deliver on its behalf, and as its act and deed any and all bonds, undertakings, recognizances, contracts and other writings in the nature thereof in penalties not exceeding Twenty million dollars & zero cents ($20,000,000.00) and the execution of such writings in pursuance of these presents shall be as binding upon said Company, as fully and amply as if they had been duly executed and acknowledged by the regularly elected officers of the Company at its principal office,

IN WITNESS WHEREOF, the said Stephen M. Haney, Vice-President, has hereunto subscribed his name and affixed the Corporate seal of the said **WESTCHESTER FIRE INSURANCE COMPANY** this 1 day of December 2009.

WESTCHESTER FIRE INSURANCE COMPANY

Stephen M. Haney, Vice President

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF PHILADELPHIA ss,

On this 1 day of December, AD. 2009 before me, a Notary Public of the Commonwealth of Pennsylvania in and for the County of Philadelphia came Stephen M. Haney ,Vice-President of the **WESTCHESTER FIRE INSURANCE COMPANY** to me personally known to be the individual and officer who executed the preceding instrument, and he acknowledged that he executed the same, and that the seal affixed to the preceding instrument is the corporate seal of said Company; that the said corporate seal and his signature were duly affixed by the authority and direction of the said corporation, and that Resolution, adopted by the Board of Directors of said Company, referred to in the preceding instrument, is now in force.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal at the City of Philadelphia the day and year first above written.

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
KAREN E. BRANDT, Notary Public
City of Philadelphia, Phila. County
My Commission Expires September 26, 2010

Notary Public

I, the undersigned Assistant Secretary of the **WESTCHESTER FIRE INSURANCE COMPANY,** do hereby certify that the original POWER OF ATTORNEY, of which the foregoing is a substantially true and correct copy, is in full force and effect.

In witness whereof, I have hereunto subscribed my name as Assistant Secretary, and affixed the corporate seal of the Corporation, this 6th day of July, 2010.

William L. Kelly, Assistant Secretary

THIS POWER OF ATTORNEY MAY NOT BE USED TO EXECUTE ANY BOND WITH AN INCEPTION DATE AFTER December 01, 2011.

Bond Number 30108535

Performance Bond For Drillers

Name of Driller Phillip Pitts and Stan White

Know All Men By These Presents

That we Phillip Pitts and Stan White and _____ Thompson Engineering, Inc. any and all employees, officers and partners (collectively hereinafter, **Principal**), and we Western Surety Company, duly organized under the laws of the State of South Dakota (hereinafter, **Surety**), are held and firmly bound unto the Director of the Environmental Protection Division, Department of Natural Resources, State of Georgia (**Director**) and his or her Successor or Successors in office, as **Obligee**, in the full sum of **FIFTEEN THOUSAND DOLLARS ($15,000.00)** for the payment of which will and truly to be made, the Principal and Surety bind ourselves, our heirs, administrators, successors and assigns, jointly and severally, by these presents.

WHEREAS, the Water Well Standards Act of 1985 (O.C.G.A. §§ 12-5-120 *et seq.*) (the Act) requires that a Driller, as that term is defined by the Act, have a performance bond with the Director to ensure compliance with the Act; and WHEREAS the above bound Principal is subject to the terms and provisions of said Act.

NOW, THEREFORE, the conditions of this obligation are such that if the above bound Principal shall fully and faithfully perform the duties and in all things comply with the procedures and standards set forth in the Act as now and hereafter amended, and the rules and regulations promulgated pursuant thereto, including but not limited to the correction of any violation of such procedures and standards upon discovery, irrespective of whether such discovery is made before completion of any well subject to this bond, then this obligation shall be void; otherwise it shall remain in full force and effect.

And Surety, for value received, agrees that no amendment to existing laws, rules or regulations, or adoption of new laws, rules or regulations shall in anyway discharge its obligation on this bond, and does hereby waive notice of any such amendment, adoption or modification.

This bond shall be effective from the 1st day of July, 2021 and shall continue in effect until June 30, 2023, unless sooner terminated by mutual agreement of Principal and Surety, provided that no such termination may be made unless sixty (60) days' prior written notice is made to the Director. In the event of such termination, the rights of the Director as Obligee and beneficiaries under this bond which arose prior to such termination shall continue.

IN WITNESS THEREOF the Principal and Surety have caused these present to be duly signed and sealed, this the 26th day of April, 2021.

Principal
Thompson Engineering, Inc.

_____

Print name:

Title:

Seal:

Surety
Western Surety Company

Kathleen Scarborough

Print name: Kathleen Scarborough

Title: Attorney-in-Fact

Seal:

Western Surety Company

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That WESTERN SURETY COMPANY, a South Dakota corporation, is a duly organized and existing corporation having its principal office in the City of Sioux Falls, and State of South Dakota, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Lisa R Butler, Joseph Russell Beattie, Lessie Ryan Anderson, Debbie Lynn Dunaway, Dewey B Mason, Individually, of Gulfport, MS
Jim E Brashier, Troy P Wagener, Kathleen Scarborough, Susan Skrmetta, Patrick Thomas Mason, James E Brashier, Individually, of Biloxi, MS
Ross Bell, Richard Teb Jones, Mary J Norval, David Robin Fortenberry, Kim Barhum, Individually, of Hattiesburg, MS
Sharon Tuten, Chris Boone, Charlotte Ramsey, Individually, of Jackson, MS
John Nance, Individually, of Tupelo, MS
Andrew P Underwood, Individually, of Mobile, AL

its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind it thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the corporation and all the acts of said Attorney, pursuant to the authority hereby given, are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law printed on the reverse hereof, duly adopted, as indicated, by the shareholders of the corporation.

In Witness Whereof, WESTERN SURETY COMPANY has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 10th day of February, 2021.

WESTERN SURETY COMPANY

Paul T. Bruflat, Vice President

State of South Dakota
County of Minnehaha } ss

On this 10th day of February, 2021, before me personally came Paul T. Bruflat, to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is the Vice President of WESTERN SURETY COMPANY described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.

My commission expires
June 23, 2021

J. MOHR NOTARY PUBLIC SOUTH DAKOTA

J. Mohr, Notary Public

CERTIFICATE

I, L. Nelson, Assistant Secretary of WESTERN SURETY COMPANY do hereby certify that the Power of Attorney hereinabove set forth is still in force, and further certify that the By-Law of the corporation printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporation this 26th day of April, 2021.

WESTERN SURETY COMPANY

L. Nelson, Assistant Secretary

Form F4280-7-2012

Go to www.cnasurety.com > Owner / Obligee Services > Validate Bond Coverage, if you want to verify bond authenticity.

Authorizing By-Law

ADOPTED BY THE SHAREHOLDERS OF WESTERN SURETY COMPANY

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the shareholders of the Company.

Section 7. All bonds, policies, undertakings, Powers of Attorney, or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, and Assistant Secretary, Treasurer, or any Vice President, or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys in Fact or agents who shall have authority to issue bonds, policies, or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile.

APPENDIX F

Boring Logs

SOUTHERN COMPANY
Energy to Serve Your World™

DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-1
Sheet 1 of 2

SITE: Plant Wansley | HOLE DEPTH: 54.2' | SURF.ELEV.: 847.7
LOCATION: Gypsum Storage Facility | COORDINATES N: 1238147.8 | E: 2023921.8
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA/HQ Core | NO. SAMPLES: 8 | NO. U.D. SAMPLES: 0
CASING SIZE: | LENGTH: | CORE SIZE: HQ | TOTAL % REC.: 78%
WATER TABLE DEPTH: 31.2' | ELEV.: | TIME AFTER COMP.: 24 hrs | DATE TAKEN:
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 10/12/2006
DRILLER: M. Hughes | RECORDER: Filipovich/Grissom | APPROVED: | DRILLING COMP. DATE: 10/17/2006

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0 0	847.70	Topsoil to 0.5'							
1		Red/brown sandy CLAY (CL) with abundant mica flecks, dry	1	0-1.5	4-4-8	12	Bulk sample taken at 1.0 - 2.0 feet PL-26, PI-21 gravel - 1.4% sand - 32.1% silt - 25.3% clay - 41.2%		
2									
3									
4									
5		Yellow brown silty sand to sandy SILT (ML) with abundant mica flecks, dry	2	4-5.5	6-10-11	21	Bulk sample taken at 3.0 to 4.0 feet nonplastic gravel - 0.5% sand - 49.4% silt - 35.6% clay - 14.5%		
6									
7									
8									
9									
10		SAA, reddish brown & yellow	3	9-10.5	3-4-5	9			
11									
12									
13									
14									
15		Orange brown, fairly dry, slightly sandy SILT with trace of black minerals	4	14-15.5	2-2-4	6			
16									
17									
18									
19									
20		Brown & tan, moist, sandy SILT with abundant mica (relic bedding)	5	19-20.5	2-4-6	10			
21									
22									
23									
24									

Form GS9901 7-26-2004

SOUTHERN COMPANY
Energy to Serve Your World™

DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-1
Sheet 2 of 2

SITE **Plant Wansley** TOTAL DEPTH **54.2'** SURF.ELEV. 8-

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25		Orange brown to brown, moist, slightly silty fine SAND (ML) with some mica	6	24-25.5	3-3-4	7			
26									
27									
28									
29									
30		SAA, less orange	7	29-30.5	2-2-4	6			
31									
32									
33									
34									
35		Dark burgundy to brown, moist, silty Saprolite	8	34-35.5	43-43-50	93			
36									
37									
38									
39		Auger refusal @ 38.9'							
40		Begin coring @ 39.2'							
41		Gray to white, weathered GNEISS abundant pyrite growths and iron staining along fractures, calcite laminations, qtz veins		39.2-44.2			2.3/5.0	46	0
42									
43									
44									
45									
46									
47				44.2-49.2			4.7/5.0	94	100
48									
49									
50									
51									
52				49.2-54.2			4.8/5.0	96	50
53									
54									
55		BOH @ 54.2'							
56									

Form GS9901 7-26-2004

SOUTHERN COMPANY
Energy to Serve Your World™

DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-2
Sheet 1 of 2

SITE: Plant Wansley | HOLE DEPTH: 45.7' | SURF.ELEV.: 834.2
LOCATION: Gypsum Storage Facility | COORDINATES N: 1237856.2 | E: 2024760.5
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA/HQ Core | NO. SAMPLES: 5 | NO. U.D. SAMPLES: 0
CASING SIZE: | LENGTH: | CORE SIZE: HQ | TOTAL % REC.: 77%
WATER TABLE DEPTH: | ELEV.: | TIME AFTER COMP.: | DATE TAKEN:
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 10/23/2006
DRILLER: S. Milan | RECORDER: Bearce/Hartsfield | APPROVED: | DRILLING COMP. DATE: 10/24/2006

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0 0	834.20								
1		Reddish brown and brown very silty fine SAND	1	1-2.5	4-5-7	12	Bulk sample taken at 1.0-2.5 feet LL-47 PI-21 gravel - 1.4% sand - 32.1% silt - 25.3% clay - 41.2%		
2									
3									
4									
5		Pale orange silty fine SAND, hard, dry	2	4.5-6	5-7-8	15	Bulk sample taken 3.0-4.0 feet non-plastic gravel - 0.5% sand - 49.4% silt - 35.6% clay - 14.5%		
6									
7									
8									
9									
10		SAA	3	9.5-11	6-8-13	21			
11									
12									
13									
14									
15		SAA	4	14.5-16	5-5-7	12			
16									
17									
18									
19									
20		Tan silty fine SAND, relic bedding	5	19.5-21	5-10-50/4				
21									
22		Start coring at 21.2'		21.2-25.7	open fracture		4.0/4.5 lost water @ 22' never regained circulation	88	90
23		Biotite GNEISS, pink & black with phenoblasts of feldspar							
24									

Form GS9901 7-26-2004

SOUTHERN COMPANY
Energy to Serve Your World

DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-2
Sheet 2 of 2

SITE Plant Wansley TOTAL DEPTH 45.7' SURF.ELEV. 834

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25									
26		SAA							
27									
28				25.7-30.7			4.9/5.0	98	69
29									
30									
31		SAA							
32									
33				30.7-35.7			3.8/5.0	76	79
34									
35									
36		SAA							
37		Smokey quartz vein Biotite GNEISS							
38				35.7-40.7			1.5/5.0	30	
39									
40									
41		Biotite GNEISS							
42									
43				40.7-45.7			4.8/5.0	96	95
44									
45									
46		BOH @ 45.7'							
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									

Form GS9901 7-26-2004

SOUTHERN COMPANY
Energy to Serve Your World

DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-3
Sheet 1 of 2

SITE: Plant Wansley | HOLE DEPTH: 50' | SURF.ELEV.: 803.2
LOCATION: Gypsum Storage Facility | COORDINATES N: 1238337.1 | E: 2024864.7
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA | NO. SAMPLES: 11 | NO. U.D. SAMPLES: 0
CASING SIZE: | LENGTH: | CORE SIZE: | TOTAL % REC.:
WATER TABLE DEPTH: 27.0' | ELEV.: | TIME AFTER COMP.: TOD | DATE TAKEN: 10/20/2006
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 10/23/2006
DRILLER: M. Hughes | RECORDER: K. Hobbs | APPROVED: | DRILLING COMP. DATE: 10/23/2006

	Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0	0	803.20								
	1		Reddish brown SILT, soft	1	0-1.5	2-2-2	4			
	2									
	3									
	4			2	3.5-5	5-7-10	17			
	5		Reddish brown SILT, medium stiff							
	6									
	7									
	8									
	9		Red brown SILT, slightly damp, soft	3	8.5-10	2-2-3	5			
	10									
	11									
	12									
	13									
	14		SAA	4	13.5-15	2-4-3	7			
	15									
	16									
	17									
	18									
	19		SAA/relic banding	5	18.5-20	2-2-4	6			
	20									
	21									
	22									
	23									
	24									

Form GS9901 7-26-2004

SOUTHERN COMPANY
Energy to Serve Your World

DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-3
Sheet 2 of 2

SITE Plant Wansley TOTAL DEPTH 50' SURF.ELEV. 803.2

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25		Wet yellowish orange, sandy SILT, relic banding with dark staining, medium stiff	6	23.5-25	2-4-4	8			
26									
27									
28									
29		Clayey sandy SILT, medium stiff, saturated	7	28.5-30	2-2-4	6			
30									
31									
32									
33									
34		SAA, soft, medium stiff	8	33.5-35	2-2-3	5			
35									
36									
37									
38									
39		SAA, medium stiff	9	38.5-40	2-4-6	10			
40									
41									
42									
43									
44		Light brown, mika flakes, saturated, SILT, very soft	10	43.5-45	(dropped)				
45									
46									
47									
48									
49		SAA, medium stiff	11	48.5-50	2-3-4	7			
50									
51		Boring terminated at 50'							
52									
53									
54									
55									
56									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-4
Sheet 1 of 2

SITE: Plant Wansley | HOLE DEPTH: 35.5' | SURF.ELEV.: 805.9
LOCATION: Gypsum Storage Facility | COORDINATES N: 1238570.9 | E: 2025555.3
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA/HQ Coring | NO. SAMPLES: 4 | NO. U.D. SAMPLES: 2
CASING SIZE: | LENGTH: | CORE SIZE: HQ | TOTAL % REC.: 95%
WATER TABLE DEPTH: | ELEV.: | TIME AFTER COMP.: | DATE TAKEN:
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 10/24/2006
DRILLER: S. Milam | RECORDER: K. Hobbs | APPROVED: | DRILLING COMP. DATE: 10/24/2006

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0 0	805.90								
1		Reddish brown sandy SILT, medium stiff	1	1-2.5	4-4-6	10	UD taken @ 3.0-5.0 feet in offset hole		
2									
3									
4									
5		Buff sandy SILT,Relic banding & feldspar crystals stiff	2	4.5-6	5-7-11	18			
6									
7									
8									
9									
10		Buff sandy SILT, relic banding with dark oxidation stains, stiff	3	9.5-11	6-9-9	18	UD taken @ 10.0-12.0 feet in offset hole		
11									
12									
13									
14									
15		SAA, saprolite, hard	4	14.5-16	3-7-50/4				
16									
17									
18		Begin Coring Gray/pink GNEISS with quartz, mica, feldspar banding some large feldspar crysals, highly weathered, red oxidation stains on large fractures		17-21.7			coarse-grained granitic	85	71
19									
20									
21									
22		SAA, highly fractured, heavy iron staining		21.7-25.5				100	50
23									
24									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-4
Sheet 2 of 2

SITE: Plant Wansley — TOTAL DEPTH: 35.5' — SURF.ELEV.: 805

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25		Gray/pink GNEISS, banding of quartz, mica, feldspar		21.7-25.5				100	50
26									
27									
28		SAA		25.5-30.5				94	74
29									
30									
31									
32									
33		SA, highly fractured, heavy iron staining		30.5-35.5				100	36
34									
35									
36		BOH @ 35.5'							
37									
38									
39									
40									
41									
42									
43									
44									
45									
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-5
Sheet 1 of 2

SITE	Plant Wansley	HOLE DEPTH	31.6'	SURF.ELEV.	773.1
LOCATION	Gypsum Storage Facility	COORDINATES N	1238797.0	E	2026220.1
ANGLE		BEARING		CONTRACTOR	SCS
DRILL NO.	CME 550				
DRILLING METHOD	HSA/HQ Core	NO. SAMPLES	3	NO. U.D. SAMPLES	0
CASING SIZE		LENGTH		CORE SIZE	HQ
TOTAL % REC.	100%				
WATER TABLE DEPTH		ELEV.		TIME AFTER COMP.	
DATE TAKEN					
TYPE GROUT		QUANTITY		MIX	
DRILLING START DATE	10/22/2006				
DRILLER	M. Hughes	RECORDER	K. Hobbs/Bearce	APPROVED	
DRILLING COMP. DATE	10/22/2006				

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0 0	773.10								
1		SILT, buff., gravel interlayers	1	0-0.5	50/5				
2									
3									
4									
5									
6		Yellowish orange silty SAND	2	5-5.5	50/5				
7									
8									
9									
10		SAA	3		38-50/1				
11		Begin Coring							
12		Light gray, hard GNEISS with large feldspar crystals and banding of quartz, micas and feldspar. very fractured		10-14.4				100	85
13									
14									
15									
16									
17		SAA with Fe, Mn oxides on larger vertical fracture faces		14.4-19.4				100	72
18									
19									
20									
21									
22		SAA		19.4-24.4				100	72
23									
24									

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GEOLOGICAL SERVICES

Hole No. GS-5
Sheet 2 of 2

SITE Plant Wansley TOTAL DEPTH 31.6' SURF.ELEV. 773'

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Standard Penetration Test Blows	Standard Penetration Test N	Comments	% Rec	RQD
25									
26									
27		Gray/pink GNEISS with large feldspar crystals, banded quartz, feldspar and mica, Fe/Mn oxides on all fracture faces		24.4-29.4				100	92
28									
29									
30									
31		SAA		29.4-31.6				100	100
32		BOH @ 31.6'							
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									
45									
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									

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GEOLOGICAL SERVICES

Hole No. ~~GS-6~~
Sheet 1 of 2

SITE: Plant Wansley | HOLE DEPTH: 41.5' | SURF.ELEV.: 767.1
LOCATION: Gypsum Storage Facility | COORDINATES N: 1238189.4 | E: 2026022.5
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA | NO. SAMPLES: 9 | NO. U.D. SAMPLES: 0
CASING SIZE: | LENGTH: | CORE SIZE: | TOTAL % REC.:
WATER TABLE DEPTH: 20.5' | ELEV.: | TIME AFTER COMP.: TOD | DATE TAKEN: 10/21/2006
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 10/21/2006
DRILLER: M. Hughes | RECORDER: T. Hartsfield | APPROVED: | DRILLING COMP. DATE: 10/22/2006

	Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0	0	767.10								
	1		Dark reddish brown sandy SILT	1	0-1.5	2-3-3	6			
	2									
	3									
	4									
	5									
	6		SAA with dark minerals	2	5-6.5	3-4-4	8			
	7									
	8									
	9									
	10									
	11		Brown SILT	3	10-11.5	3-2-3	5			
	12									
	13									
	14									
	15									
	16		Gray brown SILT with relic bedding, damp, contains mica and black minerals	4	15-16.5	3-2-4	6			
	17									
	18									
	19									
	20									
	21		Saprolite, very micaceous	5	20-21.5	3-4-4	8			
	22									
	23									
	24									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-6
Sheet 2 of 2

SITE Plant Wansley TOTAL DEPTH 41.5' SURF.ELEV. 767.1

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25									
26		SAA	6	25-26.5	8-26-45	71			
27									
28									
29									
30									
31		SAA (saprolite)	7	30-31.5	6-12-11	23			
32									
33									
34									
35									
36		Saprolite contains quartz crystals (1/8") and bands of orange-brown silt	8	35-36.5	11-13-27	40			
37									
38									
39									
40									
41		Saprolite, contains feldspar and dark brown staining	9	40-41.5	14-30-50	80			
42		BOH @ 41.5'							
43									
44									
45									
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-7
Sheet 1 of 3

SITE: Plant Wansley | HOLE DEPTH: 66.5' | SURF.ELEV.: 794.7
LOCATION: Gypsum Storage Facility | COORDINATES N: 1237419.6 | E: 2025643.0
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA | NO. SAMPLES: 14 | NO. U.D. SAMPLES: 0
CASING SIZE: | LENGTH: | CORE SIZE: | TOTAL % REC.:
WATER TABLE DEPTH: 44.7' | ELEV.: | TIME AFTER COMP.: 24 hrs. | DATE TAKEN:
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 10/11/2006
DRILLER: M. Hughes | RECORDER: R. Mudd | APPROVED: | DRILLING COMP. DATE: 10/11/2006

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0 0	794.70	Surface raked by bulldozer							
1		Red slightly sandy SILT Sand portion is medium & appears to be highly weathered rock, very stiff, moist	1	0-1.5	6-8-9	17			
2									
3									
4									
5		Reddish brown elastic SILT with sand (MH); weathered rocks larger - size of small to medium very angular pebbles	2	4.5-6	7-11-15	26	LL-58 PI-26 gravel - 0.3% sand - 21.2% silt - 29.6% clay - 48.9%		
6									
7									
8									
9									
10		SAA	3	9.5-11	2-8-14	22			
11									
12									
13									
14									
15		Reddish brown elastic SILT with sand (MH); with interbedded layers of a yellowish clay of same nature as above - less weathered rock	4	14.5-16	3-4-8	12	LL-53 PI-8 gravel 0.6% sand - 29.1% silt - 45.9% clay - 24.4%		
16									
17									
18									
19									
20		Red, very clayey SILT, with very thin layers of extremely friable black rock, medium to stiff, slightly moist	5	19.5-21	2-4-5	9			
21									
22									
23									
24									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-7
Sheet 2 of 3

SITE Plant Wansley TOTAL DEPTH 66.5' SURF.ELEV. 794'

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25		SAA. with feldspar							
26			6	24.5-26	4-4-7	11			
27									
28									
29									
30		Light red, white, black clayey weathered rock with							
31		large pebble sized pieces of intact rock quartz - like in appearance, stiff	7	29.5-31	2-4-7	11			
32									
33									
34									
35		Mottled pink, white, yellow & black sandy SILT (ML)							
36		with very small angular pebbles (weathered rock), black material makes a "C" shape in x-section,	8	34.5-36	1-2-3	5	non-plastic gravel - 1.0% sand - 39.4% silt - 44.2% clay - 15.4%		
37		wet, medium stiff							
38									
39									
40		Saprolite with							
41		Orangish tan clayey SILT with 3" layer grayish white clayey SILT interbedded - very distinct layering, some iron staining on white, moist, very stiff	9	39.5-41	5-5-13	18			
42									
43									
44									
45									
46		Dark brown, black & white interbedded micaceous saprolite - heavily weathered, moist	10	44.5-46	5-7-22	29			
47									
48									
49									
50									
51		SAA - wet	11	49.5-51	9-15-34	49			
52									
53									
54									
55									
56		SAA, more weathered, very little intact rock, very wet	12	54.5-56	8-29-40	69			

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-7
Sheet 3 of 3

SITE Plant Wansley TOTAL DEPTH 66.5' SURF.ELEV. 794.7

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
57									
58									
59									
60									
61		SAA	13	59.6-61	11-31-46	77			
62									
63									
64									
65									
66		SAA	14	64.5-66	14-31-50	81			
67		BOH @ 66.5'							
68									
69									
70									
71									
72									
73									
74									
75									
76									
77									
78									
79									
80									
81									
82									
83									
84									
85									
86									
87									
88									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-8
Sheet 1 of 2

SITE: Plant Wansley | HOLE DEPTH: 37.4 | SURF.ELEV.: 766.5
LOCATION: Gypsum Storage Facility | COORDINATES N: 1237314.2 | E: 2026576.3
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA/HQ Core | NO. SAMPLES: 4 | NO. U.D. SAMPLES: 0
CASING SIZE: | LENGTH: | CORE SIZE: HQ | TOTAL % REC.: 97%
WATER TABLE DEPTH: 15.1' | ELEV.: | TIME AFTER COMP.: 24 hrs | DATE TAKEN:
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 10/12/2006
DRILLER: S. Milam | RECORDER: R. Mudd | APPROVED: | DRILLING COMP. DATE: 10/12/2006

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0 0	766.50								
1		Red SILT, dry, medium stiff	1	0-1.5	3-4-4	8			
2									
3									
4									
5		SAA, slightly moist, stiff	2	4.5-6	5-5-7	12			
6									
7									
8									
9									
10		6" red SILT, with medium angular pebbles (black)	3	9.5-11	3-8-9	17			
11		6" white powdery very fine sandy SILT							
12		6" dark green to black CLAY, with distinct layering, some weathered rock at bottom of sample							
13									
14									
15		Red sandy SILT (ML) with medium angular pebbles, last 6" white & gray layers of very friable weathered rock - breaks down to silt	4	14.5-16	13-8-5	13			
16									
17		Begin Coring @ 16.3'							
18		Highly fractured/weathered dark gray interbedded GNEISS/SCHIST with 40 deg fracture - some pyrite flecks on the more weathered material							
19				16.7-20.2				85	0
20									
21									
22		Light gray interbedded SCHIST/GNEISS; fractured 40 deg bedding							
23				20.2-25.2				100	72
24									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-8
Sheet 2 of 2

SITE Plant Wansley TOTAL DEPTH 37.4 SURF.ELEV. 766.

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25									
26									
27									
28		SAA -		25.2-30.2				100	90
29									
30									
31									
32									
33		SAA -		30.2-35.2				100	100
34									
35									
36									
37		SAA		35.2-37.4				100	0
38		BOH @ 37.4'							
39									
40									
41									
42									
43									
44									
45									
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-9
Sheet 1 of 2

SITE	Plant Wansley	HOLE DEPTH	35.5'	SURF.ELEV.	772.7
LOCATION	Gypsum Storage Facility	COORDINATES N	1237640.6	E	2027036.9
ANGLE		BEARING	CONTRACTOR	SCS	DRILL NO.	CME 550
DRILLING METHOD	HSA/HQ Core	NO. SAMPLES	4	NO. U.D. SAMPLES	0
CASING SIZE		LENGTH	CORE SIZE	HQ	TOTAL % REC.	87%
WATER TABLE DEPTH	18.0'	ELEV.	TIME AFTER COMP.	TOD	DATE TAKEN	10/17/2006
TYPE GROUT		QUANTITY	MIX		DRILLING START DATE	10/12/2006
DRILLER	S. Milam	RECORDER	R. Mudd	APPROVED		DRILLING COMP. DATE	10/17/2006

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0	0	772.70							
	1	Light tan clayey SAND, very stiff, very dry	1	0-1.5	10-13-15	28			
	2								
	3								
	4								
	5	SAA	2	4.5-6	31-18-22	40			
	6								
	7								
	8								
	9								
	10	Red SILT, moist, medium stiff	3	9.5-11	5-4-5	9			
	11	White powdery SILT, dry, medium stiff							
	12								
	13								
	14								
	15	Light Tan clayay SAND, very stiff, dry	4	14.5-16	50/1"	ref			
	16	Auger refusal 15'							
	17	Begin coring @ 15.5'							
	18	Medium gray, slightly weathered interbedded GNEISS and SCHIST		15.5-20.5				48	60
	19								
	20								
	21								
	22			20.5-25.5				100	95
	23								
	24								

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-9
Sheet 2 of 2

SITE Plant Wansley TOTAL DEPTH 35.5' SURF.ELEV. 772

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25		Dark grey augen GNEISS, slightly weathered							
26									
27									
28				25.5-30.5				100	85
29									
30									
31									
32									
33		Hard, competent		30.5-35.5				100	100
34									
35									
36		BOH @ 35.5'							
37									
38									
39									
40									
41									
42									
43									
44									
45									
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-10
Sheet 1 of 2

SITE: Plant Wansley | HOLE DEPTH: 51.8' | SURF.ELEV.: 761.4
LOCATION: Gypsum Storage Facility | COORDINATES N: 1238583.6 | E: 2027008.5
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA/HQ Coring | NO. SAMPLES: 7 | NO. U.D. SAMPLES: 0
CASING SIZE: | LENGTH: | CORE SIZE: HQ | TOTAL % REC.: 94%
WATER TABLE DEPTH: 33.65 | ELEV.: | TIME AFTER COMP.: 24 hrs | DATE TAKEN:
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 10/20/2006
DRILLER: M. Hughes | RECORDER: T. Hartsfield | APPROVED: | DRILLING COMP. DATE: 10/20/2006

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0 0	761.40								
1		Dark reddish brown SILT with clay, white sandy lenses and pebbles	1	0-1.5	1-1-3	4			
2									
3									
4									
5		Stiff reddish brown SILT	2	4.5-6	4-6-10	16			
6									
7									
8									
9									
10		Saprolite, micaceous	3	9.5-11	5-15-20	35			
11									
12									
13									
14									
15		SAA	4	14.5-16	5-10-11	21			
16									
17									
18									
19									
20		Saprolite and weathered rock	5	19.5-21	50/5				
21									
22									
23									
24									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-10
Sheet 2 of 2

SITE Plant Wansley TOTAL DEPTH 51.8' SURF.ELEV. 76

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25									
26		Saprolite	6	24.5-26	23-23-18				
27									
28									
29									
30		Rock fragments	7	29.5-30	50/5				
31		Begin coring @ 30' Gray mica SCHIST with garnet and quartz throughout, slightly weathered along fractures		30-34.3				70	40
32									
33									
34									
35				34.3-39.3				100	50
36									
37									
38		Fresher with less weathering along fractures							
39									
40				39.3-44.3				100	85
41									
42									
43									
44									
45				44.3-49.3				100	88
46									
47									
48									
49									
50				49.3-51.8				100	80
51									
52		BOH @ 51.8'							
53									
54									
55									
56									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-11
Sheet 1 of 3

SITE: Plant Wansley | HOLE DEPTH: 61.0' | SURF.ELEV.: 773.9
LOCATION: Gypsum Storage Facility | COORDINATES N: 1239140.5 | E: 2027081.8
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA | NO. SAMPLES: 13 | NO. U.D. SAMPLES: 0
CASING SIZE: | LENGTH: | CORE SIZE: | TOTAL % REC.:
WATER TABLE DEPTH: 39.3' | ELEV.: | TIME AFTER COMP.: TOD | DATE TAKEN:
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE:
DRILLER: S. Milam | RECORDER: K. Hobbs | APPROVED: | DRILLING COMP. DATE:

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0 0	773.90								
1									
2		Reddish brown elastic SILT with SAND (MH), soft	1	1-2.5	2-2-3	5			
3									
4							UD taken @ 3.0-5.0 feet in offset hole LL-51 PI-17 gravel - 0.3% sand - 26.4% silt - 32.9% clay - 40.4%		
5									
6		Reddish brown SILT (ML), stiff	2	4.5-6	3-7-11	18			
7									
8									
9									
10		Buff. Hard SILT (ML) with mica flakes, saprolite							
11			3	9.5-11	22-50/2	ref	UD taken @ 10.0 - 12.0 feet in offset hole non-plastic sand - 48.7% silt - 42.6% clay - 8.7%		
12									
13									
14									
15		Light brown/reddish SILT (ML) with dark fractures, some quartz in fractures							
16			4	14.5-16	2-4-5	9			
17									
18									
19									
20		SAA							
21			5	19.5-21	3-3-5	6			
22									
23									
24									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-11
Sheet 2 of 3

SITE Plant Wansley TOTAL DEPTH 61.0' SURF.ELEV. 77

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25		Reddish brown SILT with mica flakes, medium stiff	6	24.5-26	3-4-7	11			
26									
27									
28									
29									
30		SAA	7	29.5-31	0-5-4	9			
31									
32									
33									
34									
35		SAA	8	34.5-36	3-4-4	8			
36									
37									
38									
39									
40		SAA very moist	9	39.5-41	2-3-4	7			
41									
42									
43									
44									
45		Yellowish orange SILT, very stiff with fractures and dark stains on fractures	10	44.5-46	9-14-31	45			
46									
47									
48									
49									
50		Yellowish orange SILT, hard, with relic banding	11	49.5-51	11-29-50/3	ref			
51									
52									
53									
54									
55		SAA	12	54.5-56	41-50/3	ref			
56									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-11
Sheet 3 of 3

SITE Plant Wansley TOTAL DEPTH 61.0' SURF.ELEV. 773.9

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Standard Penetration Test Blows	Standard Penetration Test N	Comments	% Rec	RQD
57									
58									
59									
60		Yellowish orange SILT with mica flakes	13	59.5-61					
61		BOH @ 61'							
62									
63									
64									
65									
66									
67									
68									
69									
70									
71									
72									
73									
74									
75									
76									
77									
78									
79									
80									
81									
82									
83									
84									
85									
86									
87									
88									

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SOUTHERN COMPANY
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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-12
Sheet 1 of 3

SITE: Plant Wansley | HOLE DEPTH: 81.0' | SURF.ELEV.: 773.2
LOCATION: Gypsum Storage Facility | COORDINATES N: 1239064.2 | E: 2027471.4
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA | NO. SAMPLES: 17 | NO. U.D. SAMPLES: 0
CASING SIZE: | LENGTH: | CORE SIZE: | TOTAL % REC.:
WATER TABLE DEPTH: 58.7' | ELEV.: | TIME AFTER COMP.: 24 hrs | DATE TAKEN:
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 10/19/2006
DRILLER: S. Milam | RECORDER: A. Grissom | APPROVED: | DRILLING COMP. DATE:

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0 0	773.20								
1									
2		Reddish brown, clayey, slightly sandy SILT, very stiff	1	1.0-2.5	7-8-8	16			
3									
4									
5		Very firm, layered light gray/yellow/red, dry, sandy silty highly weathered rock Saprolite	2	4.5-6	13-10-11	21			
6									
7									
8									
9									
10		SAA	3	9.5-11	10-19-27	46			
11									
12									
13									
14									
15		SAA with some mica	4	14.5-16	10-18-32	50			
16									
17									
18									
19									
20		Very dense, layered light gray to red to black, dry, sandy silty highly weathered Saprolite with gneissic banding and minerals	5	19.5-21	13-28-50/4	ref			
21									
22									
23									
24									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-12
Sheet 2 of 3

SITE Plant Wansley TOTAL DEPTH 81.0' SURF.ELEV. 77

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25		SAA with mica layers	6	24.5-26	50/4	ref			
26									
27									
28									
29									
30		SAA, with mica	7	29.5-31	50/4	ref			
31									
32									
33									
34									
35		SAA, more silty	8	34.5-36	0-4-5	9			
36									
37									
38									
39									
40		Firm, layers of orange/red/black, dry, silty sandy highly weathered Saprolite with small mica flakes	9	39.5-41	3-6-8	14			
41									
42									
43									
44									
45		SAA	10	44.5-46	31-10-8	18			
46									
47									
48									
49									
50		Very dense, layers of brown/red/orange/black and mica, dry, sandy silty highly weathered Saprolite (abundant mica)	11	49.5-51	11-30-31	61			
51									
52									
53									
54									
55		SAA plus ~4" of weathered quartz	12	54.5-56	6-6-11	17			
56									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-12
Sheet 3 of 3

SITE Plant Wansley TOTAL DEPTH 81.0' SURF.ELEV. 773.2

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
57									
58									
59									
60		Very dense, layered red/orange/brown/black,							
61		fairly dry, sandy silty weathered Saprolite and mica with several large rock fragments	13	59.5-61	11-26-46	72			
62									
63									
64									
65		SAA							
66			14	64.5-66	12-50/4	ref			
67									
68									
69									
70		SAA							
71			15	69.5-71	22-50/4	ref			
72									
73									
74									
75		Light brown /grey hard, dry Saprolite with banding	16	74.5-76	19-50/4	ref			
76									
77									
78									
79									
80		SAA, very stiff	17	79.5-81	6-9-12	21			
81									
82		BOH @ 81'							
83									
84									
85									
86									
87									
88									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-13
Sheet 1 of 2

SITE: Plant Wansley | HOLE DEPTH: 37.5' | SURF.ELEV.: 780.6
LOCATION: Gypsum Storage Facility | COORDINATES N: 1237295.0 | E: 2027246.4
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA/HQ Core | NO. SAMPLES: 3 | NO. U.D. SAMPLES: 0
CASING SIZE: | LENGTH: | CORE SIZE: HQ | TOTAL % REC.: 100%
WATER TABLE DEPTH: 16.7' | ELEV.: | TIME AFTER COMP.: 24 hrs. | DATE TAKEN: 10/10/2006
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 10/10/2006
DRILLER: M. Hughes | RECORDER: R. Mudd | APPROVED: | DRILLING COMP. DATE: 10/10/2006

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0 0	780.60								
1		Light reddish brown elastic SILT with sand (MH), dry, soft	1	0-1.5	2-3-1	4	Bulk sample taken at 1.5-3.0 feet LL-50 PI-17 sand - 21.5% silt - 32.2% clay - 46.3%		
2									
3									
4									
5		Red micaceous sandy SILT (ML), moist, medium to stiff	2	4.5-6	3-3-6	9	non-plastic sand - 40.9% silt - 39.1% clay - 20.0%		
6									
7									
8									
9									
10		Reddish brown & black micaceous SILT, moist, medium to stiff - flakes apart along planes relict bedding	3	9.5-11	2-2-7	9			
11									
12									
13		TOR @ 12.5'							
14		Grey to greenish grey, hard interbedded GNEISS and SCHIST with abundant pyrite		12.5-14			1.5/1.5	100	90
15									
16									
17		SAA, rust - water		14-19			5/5	100	94
18									
19									
20									
21									
22		SAA		19-24	4.7/5			100	88
23									
24									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-13
Sheet 2 of 2

SITE Plant Wansley TOTAL DEPTH 37.5' SURF.ELEV. 78

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25									
26								100	84
27		Grey to greenish grey, hard fresh GNEISS		24-29	5/5				
28									
29									
30									
31		SAA		29-32.5	3.5/3.5			100	50
32									
33									
34									
35		SAA		32.5-37.5	5/5			100	85
36									
37									
38		BOH @ 37.5'							
39									
40									
41									
42									
43									
44									
45									
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-14
Sheet 1 of 2

SITE	Plant Wansley	HOLE DEPTH	44.5'	SURF.ELEV.	737.7
LOCATION	Gypsum Storage Facility	COORDINATES N	1239460.6	E	2028315.3
ANGLE		BEARING		CONTRACTOR	SCS	DRILL NO.	CME 550
DRILLING METHOD	HSA/HQ Core	NO. SAMPLES	2	NO. U.D. SAMPLES	0
CASING SIZE		LENGTH		CORE SIZE	HQ	TOTAL % REC.	93%
WATER TABLE DEPTH	20.4'	ELEV.		TIME AFTER COMP.	TOD	DATE TAKEN	10/19/2006
TYPE GROUT		QUANTITY		MIX		DRILLING START DATE	10/18/2006
DRILLER	S. Milam	RECORDER	A. Grissom	APPROVED		DRILLING COMP. DATE	10/19/2006

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0 0	737.70								
1		No recovery							
2			1	1-2.5	25-50/4	ref			
3									
4									
5		Medium gray to dark brown, fairly dry, Saprolite							
6			2	4.5-6	50/4	ref			
7		Begin Coring @ 6.5'							
8		Dark to medium gray, weathered interbedded GNEISS and SCHIST; steep fractures; heavy iron staining; v. low recovery		6.5-9.5			3.0/0.8	26	0
9									
10									
11									
12				9.5-14.5			5.0/1.3	26	0
13									
14									
15									
16									
17							Reamed casing from 6.5' to 25' Restarted coring at 25'		
18									
19									
20									
21									
22									
23									
24									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-14
Sheet 2 of 2

SITE Plant Wansley TOTAL DEPTH 44.5' SURF.ELEV. 737

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25									
26		Dark gray, slightly weathered GNEISS; v. fractured heavy iron staining;		25-29.5			4.5/4.0	88	0
27		Becomes light gray to almost white around 28',							
28									
29									
30				29.5-34.5			5.0/4.5	90	20
31									
32		SAA							
33									
34									
35				34.5-39.5			5.0/5.0	100	50
36									
37		SAA							
38									
39									
40				39.5-44.5			5.0/4.7	94	35
41									
42		extremely weathered zone from 42 - 42.5'							
43									
44									
45		BOH @ 44.5'							
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									

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SOUTHERN COMPANY
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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-15
Sheet 1 of 2

SITE: Plant Wansley | HOLE DEPTH: 41.3' | SURF.ELEV.: 719.7
LOCATION: Gypsum Storage Facility | COORDINATES N: 1239617.3 | E: 2028782.9
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA/HQ Core | NO. SAMPLES: 5 | NO. U.D. SAMPLES: 0
CASING SIZE: | LENGTH: | CORE SIZE: HQ | TOTAL % REC.: 97%
WATER TABLE DEPTH: 18.0' | ELEV.: | TIME AFTER COMP.: 24 hrs | DATE TAKEN:
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 10/19/2006
DRILLER: M. Hughes | RECORDER: A. Grissom | APPROVED: | DRILLING COMP. DATE:

	Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0	0	719.70	Topsoil to 0.5'							
	1		Stiff, reddish brown, fairly dry, slightly sandy SILT with few pebbles	1	0-1.5	3-5-6	11			
	2									
	3									
	4									
	5		Stiff, red and yellowish orange mottled, fairly dry, SILT	2	4.5-6	3-5-6	11			
	6									
	7									
	8									
	9									
	10		Soft, orange brown, slightly moist, clayey SILT with trace of pebbles	3	9.5-11	1-1-1	2			
	11									
	12									
	13									
	14									
	15		Stiff, light tannish gray to red orange, slightly damp, sandy clayey SILT with lots of mica and highly decomposed rock	4	14.5-16	1-1-10	11			
	16									
	17									
	18									
	19									
	20		Dense, grayish brown, dry, silty sandy highly weathered rock (Saprolite) TOR @ 21'	5	19.5-21	10-21-21	42			
	21									
	22		Grey to dark grey augen GNEISS with calcite laminations		20.7 - 23.9				100	90
	23									
	24									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-15
Sheet 2 of 2

SITE Plant Wansley TOTAL DEPTH 41.3' SURF.ELEV. 719

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25		Grey to dark grey, hard augen GNEISS with calcite laminations		23.9-28.9				92	88
26									
27									
28									
29									
30				28.9-33.9				96	98
31									
32									
33									
34									
35				33.9-38.9				100	85
36									
37									
38									
39									
40				38.9-41.3				100	80
41									
42		BOH @ 41.3							
43									
44									
45									
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									

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SOUTHERN COMPANY
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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-16
Sheet 1 of 2

SITE: Plant Wansley | HOLE DEPTH: 40.1' | SURF.ELEV.: 710.5
LOCATION: Gypsum Storage Facility | COORDINATES N: 1239205.2 | E: 2029067.9
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HQA/HQ Core | NO. SAMPLES: 5 | NO. U.D. SAMPLES: 2
CASING SIZE: | LENGTH: | CORE SIZE: HQ | TOTAL % REC.: 97%
WATER TABLE DEPTH: 20.7' | ELEV.: | TIME AFTER COMP.: 24 hrs | DATE TAKEN: 10/19/2006
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 10/18/2006
DRILLER: M. Hughes | RECORDER: A. Grissom | APPROVED: | DRILLING COMP. DATE: 10/19/2006

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0 0	710.50	Topsoil to 0.5'							
1		Reddish brown, sandy slightly sandy SILT, fairly dry, firm	1	0-1.5	1-3-5	8			
2									
3									
4									
5							UD taken @ 4.0 - 6.0 feet in offset hole		
6		Very stiff, reddish brown and yellowish orange mottling, fairly dry, slightly sandy SILT with trace of pebbles	2	5-6.5	6-12-14	26			
7									
8									
9									
10									
11		Stiff, black/brown to yellow, fairly dry, silty SAND and weathered rock (layered)	3	10-11.5	4-5-6	11			
12									
13							UD taken @ 12.0 - 14.0 feet in offset hole		
14									
15									
16		Very loose, tan to light yellowish brown, slightly moist, silty fine grained SAND	4	15-16.5	WOH-2-2	4			
17									
18									
19									
20									
21		SAA, loose	5	20-21.5	3-2-5	7			
22									
23									
24									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-16
Sheet 2 of 2

SITE Plant Wansley TOTAL DEPTH 40.1' SURF.ELEV. 710

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25									
26		Very dense, gray and dark brown layers, slightly moist, weathered rock and clayey fine sand	6	25-26.5	26-50/3	ref			
27		Begin coring @ 26.9'							
28		Medium gray, hard mica SCHIST with multiple fractures and iron stains in the first 2' with small quartzite veins		26.9-30.1			3.2/3.0	93	25
29									
30									
31									
32									
33		SAA, less fractured		30.1-35.1			5.0/4.9	98	50
34									
35									
36									
37				35.1-40.1			5.0/5.0	100	30
38									
39									
40		BOH @ 40.1'							
41									
42									
43									
44									
45									
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-17
Sheet 1 of 2

SITE	Plant Wansley	HOLE DEPTH	50.4'	SURF.ELEV.	756.1
LOCATION	Gypsum Storage Facility	COORDINATES N	1237971.7	E	2027569.5
ANGLE		BEARING	CONTRACTOR	SCS	DRILL NO.	CME 550
DRILLING METHOD	HSA/HQ Core	NO. SAMPLES	7	NO. U.D. SAMPLES	0
CASING SIZE		LENGTH	CORE SIZE	HQ	TOTAL % REC.	94%
WATER TABLE DEPTH	21.65'	ELEV.	TIME AFTER COMP.		DATE TAKEN	10/5/2006
TYPE GROUT		QUANTITY	MIX		DRILLING START DATE	10/5/2006
DRILLER	B. Filipovich	RECORDER	I. Millet/R. Mudd	APPROVED		DRILLING COMP. DATE	10/9/2006

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0 0	756.10								
1		0.2" Topsoil Red SILT with sand (MH),elastic, dry, firm, small pebbles, trace mica	1	0-1.5	2-3-3	6			
2							LL-55 PI-22 gravel - 0.3% sand - 18.1% silt - 40.1% clay - 41.5%		
3									
4									
5		SAA	2	4-5.5	4-4-6	10			
6									
7									
8									
9									
10		Orange & tan sandy SILT (ML), dry, trace mica, crumbly	3	9-10.5	2-3-4	7			
11									
12									
13									
14									
15		SAA, black, mottled	4	14-15.5	1-2-3	5	non-plastic		
16									
17									
18									
19									
20		Orange & white clayey SILT, dry, trace mica, heavy black mottled	5	19-20.5	2-2-2	4			
21									
22									
23									
24									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-17
Sheet 2 of 2

SITE Plant Wansley TOTAL DEPTH 50.4' SURF.ELEV. 756

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25		White & tan sandy silt (ML), moist, trace mica, trace residual schist form, black, mottled	6	24-25.5	2-2-5	7	non-plastic sand - 42.9% silt.- 51.5% clay - 5.6%		
26									
27									
28									
29									
30		Brown & white SILT, saturated, then fractured gneiss last 1"	7	29-30.5	6-50-6	ref			
31		TOR @ 30' - Begin Coring							
32		Grey very weathered fractured GNEISS		30-33.4	3.4/3.4			100	5
33									
34									
35									
36				33.4-38.4	4.3/5			86	95
37									
38									
39									
40		Grey augen SCHIST hard, fresh, iron staining along fractures							
41				38.4-43.4	4.9/5			100	95
42									
43									
44									
45									
46				43.4-48.4	5/5			100	66
47									
48									
49									
50		SAA		48.4-50.4	2.3/2			86	85
51		BOH @ 50.4'							
52									
53									
54									
55									
56									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-18
Sheet 1 of 2

SITE: Plant Wansley | HOLE DEPTH: 32.5' | SURF.ELEV.: 731.6
LOCATION: Gypsum Storage Facility | COORDINATES N: 1238342.8 | E: 2027638.3
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA/HQ Coring | NO. SAMPLES: 2 | NO. UD SAMPLES: 0
CASING SIZE: | LENGTH: | CORE SIZE: HQ | TOTAL %REC.: 95%
WATER TABLE DEPTH: 15.2' | ELEV.: | TIME AFTER COMP.: | DATE TAKEN:
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 10/4/2006
DRILLER: B. Filipovich | RECORDER: L. Millet | APPROVED: | DRILLING COMP. DATE: 10/5/2006

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0	731.60	Topsoil removed by bulldozer							
1		Red and Tan silty CLAY, dry	1	0-1.5	2-5-2	ref			
2									
3									
4									
5									
6		SAA, abundant mica	2	5-6.5	12-17-30	47			
7									
8		TOR @ 7.4' Begin coring							
9									
10		Fractured, weathered black and white augen GNEISS, heavy iron staining, thin clay rinds in fractures, fractures ~30°, 3-6" b/t fracs		7.5-12.2			5.7/5.7	100	47
11									
12									
13									
14									
15		SAA		12.2-17.5			5.3/5.3	100	73
16									
17									
18									
19		Black and white fractured GNEISS, ~30° fractures, occ, thin clay rinds, no Fe stains		17.5-22.5			5/4.8	96	95
20		pyrite calcite laminations							
21									
22									
23		SAA		22.5-27.5			5/4.9	98	100
24									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-18
Sheet 2 of 2

SITE Plant Wansley TOTAL DEPTH 32.5' SURF.ELEV. 73

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25				22.5-27.5				98	100
26									
27									
28									
29									
30		Black and white augen GNEISS, 3-6" b/t fractures, ~30°, epidote and pyrite in fractures		27.5-32.5			lost circulation ~300 gallons of water used to core 32'	100	60
31									
32									
33		BOH @ 32.5'							
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									
45									
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-19
Sheet 1 of 2

SITE: Plant Wansley | HOLE DEPTH: 39.2' | SURF.ELEV.: 750.0
LOCATION: Gypsum Storage Facility | COORDINATES N: 1238392.9 | E: 2028069.8
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA/HQ Core | NO. SAMPLES: 3 | NO. U.D. SAMPLES: 0
CASING SIZE: | LENGTH: | CORE SIZE: HQ | TOTAL % REC.: 94%
WATER TABLE DEPTH: 17.25' | ELEV.: | TIME AFTER COMP.: 24 hrs. | DATE TAKEN: 9/27/2006
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 9/27/2006
DRILLER: B. Filipovich | RECORDER: A. Grissom | APPROVED: | DRILLING COMP. DATE: 9/27/2006

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0 0	750.00	Topsoil 3/10' deep							
1		Firm, reddish brown, fairly dry, elastic SILT with sand (MH)	1	0-1.5	2-4-4	8	Bulk sample taken' at 1.5 - 3.0 feet LL-54 PI-24 gravel - 1.1% sand - 15.2% silt - 35.7% clay - 48.0%		
2									
3									
4									
5									
6		Very firm, stratified red orange to tan to olive gray, dry, sandy SILT (ML) (Saprolite)	2	5-6.5	7-8-12	20	Bulk sample taken' at 6.0 - 7.0 feet non-plastic gravel - 5.0% sand - 37.6% silt - 24.9% clay - 32.5%		
7									
8									
9									
10									
11		Dense, layered dark red to greenish gray, dry, clayey SAND (SC) & Saprolite	3	10-11.5	20-21-20	41			
12									
13									
14									
15							Screen		
16		Auger refusal @ 15.2' Begin coring @ 15.2'							
17		Dark gray, hard, competent GNEISS					Water table at 17.25'		
18		Water stains at soil rock interface Fracture with water stains 6" below TOR		15.2-19.2			2.9/4	73	69
19									
20									
21									
22				19.2-24.2			5.1/5	100	88
23									
24									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-19
Sheet 2 of 2

SITE Plant Wansley TOTAL DEPTH 39.2' SURF.ELEV. 75

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25		Greensh grey, hard competent GNEISS							
26									
27				24.2-29.2			5/5	100	95
28									
29									
30									
31									
32				29.2-34.2			5/5	100	100
33									
34									
35									
36									
37				34.2-39.2			5/5	100	100
38									
39									
40		BOH @ 39.2'							
41									
42									
43									
44									
45									
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-20
Sheet 1 of 2

SITE: Plant Wansley | HOLE DEPTH: 43.5' | SURF.ELEV.: 713.8
LOCATION: Gypsum Storage Facility | COORDINATES N: 1238812.9 | E: 2028418.9
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA | NO. SAMPLES: 10 | NO. U.D. SAMPLES: 0
CASING SIZE: | LENGTH: | CORE SIZE: | TOTAL % REC.:
WATER TABLE DEPTH: | ELEV.: | TIME AFTER COMP.: | DATE TAKEN:
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 10/3/2006
DRILLER: B. Filipovich | RECORDER: L. Millet | APPROVED: | DRILLING COMP. DATE: 10/4/2006

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0	713.80								
0		Red stiff silty CLAY with organics, dry							
1			1	0-1.5	2-2-3	5			
2									
3									
4									
5									
6			2	5-6.5	6-8-12	20			
7									
8									
9									
10									
11		Yellow, stiff silty CLAY to clayey SILT (Saprolite) mica and occasional black mottling	3	10-11.5	6-8-7	15			
12									
13									
14									
15									
16		Yellowish tan SILT w/occasional organics and black mottling, abundant mica, crumbly	4	15-16.5	1-1-2	3			
17									
18									
19									
20									
21		Reddish orange SILT, wet black mottling, trace mica, crumbly	5	20-21.5	1-1-1	2			
22									
23									
24									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-20
Sheet 2 of 2

SITE: Plant Wansley — TOTAL DEPTH: 43.5' — SURF.ELEV.: 713'

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25									
26		White and brown SILT, residual schist form, abundant mica, black mottled, saturated	6	25-26.5	1-2-3	5	Water table @ 26'		
27									
28									
29									
30									
31		Grayish tan SILT	7	30-31.5	1-2-3	5			
32									
33									
34									
35									
36		trace mica	8	35-36.5	2-5-8	13			
37									
38									
39									
40									
41		SAA, including mica content	9	40-41.5	30-30-50/2	ref			
42									
43		BOH/TOR @ 43.5	10	43.3					
44									
45									
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-21
Sheet 1 of 3

SITE	Plant Wansley	HOLE DEPTH	77.5'	SURF.ELEV.	789.4
LOCATION	Gypsum Storage Facility	COORDINATES N	1238101.4	E	2028695.2
ANGLE		BEARING		CONTRACTOR	SCS
DRILL NO.	CME 550				
DRILLING METHOD	HSA/HQ Core	NO. SAMPLES	13	NO. U.D. SAMPLES	2
CASING SIZE		LENGTH		CORE SIZE	HQ
TOTAL % REC.	92%				
WATER TABLE DEPTH	74'	ELEV.		TIME AFTER COMP.	2 hrs
DATE TAKEN	10/3/2006				
TYPE GROUT		QUANTITY		MIX	
DRILLING START DATE	10/2/2006				
DRILLER	S. Milam	RECORDER	L. Millet	APPROVED	
DRILLING COMP. DATE	10/4/2006				

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0 0	789.40	Topsoil removed to flatten area for rig							
1									
2		Red silty clayey SAND and Saprolite, dry,	1	1-2.5	1-2-3	5			
3									
4									
5		Red silty SAND and schist Saprolite, dry, crumbly, silty SAND		4.5-6	4-8-14	22	UD taken @ 4.0 - 6.0 feet in offset hole		
6									
7									
8									
9									
10		Brown and orange clay and highly weathered schist, with black mottling, dry,	2	9.5-11	8-12-13	25	UD taken @ 9.0 - 11.0 feet in offset hole		
11									
12									
13									
14									
15		Saprolite schist with some silty sand, Fe staining and black mottling, dry, silty SAND, saprolite	3	14.5-16	5-12-18	30			
16									
17									
18									
19									
20		SAA	4	19.5-21	4-6-14	20			
21									
22									
23									
24									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-21
Sheet 2 of 3

SITE Plant Wansley TOTAL DEPTH 77.5' SURF.ELEV. 789.-

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25		Saprolite with some silty SAND, Fe staining and black mottling, moist	5	24.5-26	8-16-43	59		50	
26									
27									
28									
29									
30		Saprolite, silty SAND, occ Fe staining, black mottling, moist, more cohesive	6	29.5-31	8-17-33	50		60	
31									
32									
33									
34									
35		Black/green schist Saprolite, decomposed, some clay, dry, some Fe staining, occ black mottled	7	34.5-36	50/4	ref		10	
36									
37									
38									
39									
40		Gray clay and highly weathered Saprolite schist, crumbly, Fe staining and black mottled	8	39.5-41	41-50/4	ref		30	
41									
42									
43									
44									
45		Gray clay and highly weathered schist Saprolite, more cohesive, moist, occ heavy black mottled	9	44.5-46	12-18-24	42		90	
46									
47									
48									
49									
50		SAA wit silty SAND (SM) with more Fe staining	10	49.5-51	8-16-50/4	ref	non-plastic gravel - 3.8% sand - 57.3% silt - 33.7% clay - 5.2%	50	
51									
52									
53									
54									
55		Gray-brown saprolite	11	54.5-56	8-24-27	51		30	
56									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-21
Sheet 3 of 3

SITE Plant Wansley TOTAL DEPTH 77.5' SURF.ELEV. 789.4

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
57									
58									
59									
60		Silty weathered schist Saprolite, dry							
61			12	59.5-61	50/4	ref			
62									
63									
64									
65		Gray silty SAND with highly weathered schist Saprolite,							
66		wet, Fe staining, occ black mottling (silty SAND) TOR Begin coring @ 66'	13	64.5-66	50/4	ref	water table at 64'		
67									
68		Dark gray and black SCHIST, regular fractures							
69		heavy Fe staining		66-70				87	49
70									
71		SAA, with garnets		70-75				100	88
72									
73									
74		Silver gray SCHIST, hard. little to no Fe staining in fractur few garnets							
75									
76				75-77.5				90	100
77									
78		BOH @ 77.5'							
79									
80									
81									
82									
83									
84									
85									
86									
87									
88									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-22
Sheet 1 of 3

SITE: Plant Wansley | HOLE DEPTH: 75.0' | SURF.ELEV.: 729.3
LOCATION: Gypsum Storage Facility | COORDINATES N: 1238610.8 | E: 2029031.2
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA | NO. SAMPLES: 16 | NO. U.D. SAMPLES: 0
CASING SIZE: | LENGTH: | CORE SIZE: | TOTAL % REC.:
WATER TABLE DEPTH: 48.7' | ELEV.: | TIME AFTER COMP.: TOD | DATE TAKEN:
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 10/3/2006
DRILLER: S. Milam | RECORDER: L. Millet | APPROVED: | DRILLING COMP. DATE: 10/4/2006

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0 0	729.30	Topsoil removed to flatten area for rig							
1									
2		Tan silty SAND and schist Saprolite, dry	1	1-2.5	3-9-16	25			
3									
4									
5		Light brown SILT with sand (ML), crumbly	2	4.5-6	9-18-29	47	non-plastic sand - 20.8% silt - 65.6% clay - 13.6%		
6									
7									
8									
9									
10		Brown silty SAND and schist Saprolite, dry, Fe staining and black mottling	3	9.5-11	4-8-38	46			
11									
12									
13									
14									
15		SAA, less Fe staining	4	14.5-16	10-17-41	58			
16									
17									
18									
19									
20		Contains abundant rock fragments	5	19.5-21	10-16-22	38			
21									
22									
23									
24									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-22
Sheet 2 of 3

SITE Plant Wansley TOTAL DEPTH 75.0' SURF.ELEV. 7

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25		Tan silty SAND and schist Saprolite, dry, some Fe staining and black mottling	6	24.5-26	12-36-50/4	ref			
26									
27									
28									
29									
30		Schist Saprolite with brownish gray CLAY, dry, Fe staining and black mottling, firm	7	29.5-31	15-21-36	57			
31									
32									
33									
34									
35		Tan gray silty SAND with residual schist, dry, crumbly, black mottling	8	34.5-36	15-25-50/4	ref			
36									
37									
38									
39									
40		Highly weathered schist with tan and gray silty SAND , dry occ organics and heavy black mottling	9	39.5-41	50/4	ref			
41									
42									
43									
44									
45		Light tan and gray silty SAND with schist Saprolite dry, occ organics and black mottling	10	44.5-46	31-43-50/4	ref			
46									
47									
48									
49									
50		Schist Saprolite with silty SAND, dry, Fe staining	11	49.5-51	24-23-19	42			
51									
52									
53									
54									
55		Highly weathered schist Saprolite with tan silty SAND loose, Fe staining, black mottling, saturated	12	54.5-56	50/4	ref	water table at 55'		
56									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-22
Sheet 3 of 3

SITE **Plant Wansley** TOTAL DEPTH **75.0'** SURF.ELEV. 729.3

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
57									
58									
59									
60		Highly weathered schist Saprolite with gray silty SAND							
61		Fe staining	13	59.5-61	23-50/4	ref			
62									
63									
64									
65		SAA, less Fe staining							
66			14	64.5-66	15-50/2	ref			
67									
68									
69									
70		SAA							
71			15	69.5-71	50/4	ref			
72									
73									
74									
75		Heavy Fe oxide staining							
76		BOH/TOR @ 75'	16	74.5-76	50/1	ref			
77									
78									
79									
80									
81									
82									
83									
84									
85									
86									
87									
88									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-23
Sheet 1 of 3

SITE: Plant Wansley | HOLE DEPTH: 60.0' | SURF.ELEV.: 697.9
LOCATION: Gypsum Storage Facility | COORDINATES N: 1237682.9 | E: 2029786.7
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA | NO. SAMPLES: 13 | NO. U.D. SAMPLES: 0
CASING SIZE: | LENGTH: | CORE SIZE: | TOTAL % REC.:
WATER TABLE DEPTH: 12.6' | ELEV.: | TIME AFTER COMP.: TOD | DATE TAKEN:
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 10/4/2006
DRILLER: S. Milam | RECORDER: L. Millet | APPROVED: | DRILLING COMP. DATE:

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0 0	697.90								
1									
2		Reddish brown elastic SILT with sand (MH)	1	1-2.5	3-6-8	14	LL-54 PI-18 gravel - 0.3% sand - 19.3% silt - 46.6% clay - 33.8%		
3									
4									
5		Orange and light orange SILT, dry,							
6		dark red mottling, firm	2	4.5-6	3-3-4	7			
7									
8									
9									
10		SAA, occasional black mottling							
11			3	9.5-11	2-2-2	4			
12									
13									
14									
15		Light gray and tan SILT with sand, orange and black					non-plastic		
16		mottling, firm	4	14.5-16	1-2-6	8	sand - 29.0% silt - 58.2% clay - 12.8%		
17									
18									
19									
20		Tan and brown SILT, residual schist, dry,							
21		crumbly, orange and black mottling	5	19.5-21	9-20-25				
22									
23									
24									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-23
Sheet 2 of 3

SITE Plant Wansley TOTAL DEPTH 60.0' SURF.ELEV. 6

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25		SAA, residual chert form	6	24.5-26	9-14-21	35			
26									
27									
28									
29									
30		Highly weathered schist, with red silty SAND, dry, black mottling	7	29.5-31	9-14-28	42			
31									
32									
33									
34									
35		Red brown and tan SILT, saturated, abundant mica, residual schist, occasional black mottling	8	34.5-36	50/5	ref			
36									
37									
38									
39									
40		Brown, tan and green silty SAND, dry, black mottling, trace mica	9	39.5-41	0-24-29	53	non-plastic gravel - 6.9% sand - 50.0% silt - 30.0% clay - 13.1%		
41									
42									
43									
44									
45		SAA, Schist Saprolite	10	44.5-46	22-50-3	ref			
46									
47									
48									
49									
50		Green, orange and white SILT , dry, with mica, schist Saprolite	11	49.5-51	20-50-2	ref			
51									
52									
53									
54									
55		SAA, some red mottling	12	54.5-56	50/2	ref			
56									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-23
Sheet 3 of 3

SITE Plant Wansley TOTAL DEPTH 60.0' SURF.ELEV. 697.9

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Standard Penetration Test Blows	Standard Penetration Test N	Comments	% Rec	RQD
57									
58									
59		residual schist Saprolite, abundant mica, dry		59.5-61	50/4	ref			
60		BOH @ 60'	13						
61									
62									
63									
64									
65									
66									
67									
68									
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SOUTHERN COMPANY
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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-24
Sheet 1 of 3

SITE: Plant Wansley | HOLE DEPTH: 65.5' | SURF.ELEV.: 725.0
LOCATION: Gypsum Storage Facility | COORDINATES N: 1238255.5 | E: 2029589.1
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA | NO. SAMPLES: 14 | NO. U.D. SAMPLES: 0
CASING SIZE: | LENGTH: | CORE SIZE: | TOTAL % REC.:
WATER TABLE DEPTH: 39.5' | ELEV.: | TIME AFTER COMP.: TOD | DATE TAKEN: 10/5/2006
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 10/5/2006
DRILLER: S. Milam | RECORDER: R. Mudd | APPROVED: | DRILLING COMP. DATE: 10/11/2006

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0 0	725.00								
1									
2		Red SILT, with pieces of weathered rock - dry, very stiff	1	1-2.5	3-6-12	18			
3									
4									
5		Reddish tan micaceous SILT, with pieces of weathered rock - dry, very stiff	2	4.5-6	5-9-16	25			
6									
7									
8									
9									
10		Tannish silver micaceous clayey SILT, dry, very stiff	3	9.5-11	12-17-25	42			
11									
12									
13									
14									
15		Light brown micaceous clayey SILT, with large pieces of easily plyable weathered rock (black & gold), dry, very stiff	4	14.5-16	6-15-24	39			
16									
17									
18									
19									
20		SAA	5	19.5-21	10-15-50/4	Ref			
21									
22									
23									
24									

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SOUTHERN COMPANY
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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-24
Sheet 2 of 3

SITE Plant Wansley TOTAL DEPTH 65.5' SURF.ELEV. 72

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25		SAA							
26			6	24.5-26	19-21-34	58			
27									
28									
29									
30		SAA	7	29.5-31	22-37-43	80			
31									
32									
33									
34									
35		Large seams of black as well	8	34.5-36	20-27-38	65			
36									
37									
38									
39									
40		SAA, mostly silver & gold, no black seams, still dry	9	39.5-41	20-19-36	55			
41									
42									
43									
44									
45									
46		Tan, silver & white SILT with pieces of weathered rock, moist - iron staining on faces	10	44.5-46	19-21-29	50			
47									
48									
49									
50		Orangish CLAY with tan & silver SILT with SAPROLITE, seams of very dark brown silt throughout - moist, iron staining	11	49.5-51	12-22-26	48			
51									
52									
53									
54									
55		Gray & silver SAPROLITE, very micaceous SILT (ML), some black areas - all breaks apart easily (same as everything above), moist	12	54.5-56	13-22-37	59			
56									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-24
Sheet 3 of 3

SITE Plant Wansley TOTAL DEPTH 65.5' SURF.ELEV. 725

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
57									
58									
59									
60		SAA, iron staining, moist	13	59.5-61	12-26-29	55			
61									
62									
63									
64									
65		SAA, more powdery, dry	14	64.5-66	50/4	Ref			
66		TOR @ 65.5' no coring							
67									
68									
69									
70									
71									
72									
73									
74									
75									
76									
77									
78									
79									
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88									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-25
Sheet 1 of 2

SITE Plant Wansley | HOLE DEPTH 43.7' | SURF.ELEV. 785.7
LOCATION Gypsum Storage Facility | COORDINATES N 1237863.9 E 2028247.1
ANGLE | BEARING | CONTRACTOR SCS | DRILL NO. CME 550
DRILLING METHOD HSA/HQ Core | NO. SAMPLES 6 | NO. U.D. SAMPLES 0
CASING SIZE | LENGTH | CORE SIZE HQ | TOTAL % REC. 98%
WATER TABLE DEPTH 20.2' | ELEV. | TIME AFTER COMP. 24 hrs. | DATE TAKEN 9/27/2006
TYPE GROUT | QUANTITY | MIX | DRILLING START DATE 9/26/2006
DRILLER B. Filipovich | RECORDER A. Grissom | APPROVED | DRILLING COMP. DATE 9/27/2006

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0 0	785.70								
1		Topsoil 4/10' deep Soft, reddish brown, moist, slightly sandy SILT	1	0-1.5	2-2-2	4			
2									
3									
4									
5		Very stiff, light brown to red (layered), fairly dry, sandy SILT & Saprolite	2	4-5.5	7-10-18	28			
6									
7									
8									
9									
10		Very stiff, yellow to orange red, dry, sandy clayey SILT and some Saprolite	3	9-10.5	7-15-12	27			
11									
12									
13									
14									
15		Yellowish brown to dark gray, dry, clayey SILT & weathered schist Saprolite	4	14-15.5	8-50/2	Ref			
16									
17									
18									
19									
20		SAA	5	19-20.5	12-27-32	59	water table at 20.2'		
21									
22									
23									
24									

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SOUTHERN COMPANY
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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-25
Sheet 2 of 2

SITE Plant Wansley TOTAL DEPTH 43.7' SURF.ELEV. 78[illegible]

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25		SAA for 4", then light gray, dry, soft highly weathered Saprolite	6	24-25.5	19-50/5	Ref			
26									
27									
28									
29		Auger refusal @ 29.0'							
30		Begin coring @ 29.0'							
31		Dark gray mica SCHIST, weathered with many rust stains/water fractures							
32				29-33.7			4.4/4.7	93	25
33									
34									
35									
36				33.7-38.7			5/5	100	45
37									
38		Dark gray , hard mica SCHIST with iron staining along fractures							
39		SAA							
40									
41				38.7-43.7			5/5	100	95
42									
43									
44		BOH @ 43.7'							
45									
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									

SOUTHERN COMPANY
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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-26
Sheet 1 of 2

SITE: Plant Wansley | HOLE DEPTH: 60.0' | SURF.ELEV.: 744.7
LOCATION: Gypsum Storage Facility | COORDINATES N: 1237263.4 | E: 2028878.0
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA/HQ Core | NO. SAMPLES: 11 | NO. U.D. SAMPLES: 2
CASING SIZE: | LENGTH: | CORE SIZE: HQ | TOTAL % REC.: 84%
WATER TABLE DEPTH: | ELEV.: | TIME AFTER COMP.: | DATE TAKEN: 9/27/2006
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 9/27/2006
DRILLER: B. Filipovich | RECORDER: A. Grissom | APPROVED: | DRILLING COMP. DATE: 9/27/2006

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0 0	744.70	Topsoil 2/10' deep							
1		Stiff, reddish brown, very dry, sandy SILT with some mica fragments	1	0-1.5	4-7-7	14	UD taken @ 1.0 - 3.0 feet in offset hole		
2									
3									
4									
5									
6		Hard, light grayish brown, dry, clayey SILT & weathered Saprolite	2	5-6.5	10-14-21	35			
7									
8									
9									
10									
11		SAA, increase in Saprolite	3	10-11.5	8-16-32	48	UD taken @ 10.0 - 12.0 feet in offset hole		
12									
13									
14									
15									
16		SAA	4	15-16.5	11-25-32	57			
17									
18									
19									
20									
21		SAA, layers of light gray, black, & red brown	5	20-21.5	12-13-22	35			
22									
23									
24									

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SOUTHERN COMPANY
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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-26
Sheet 2 of 2

SITE Plant Wansley TOTAL DEPTH 60.0' SURF.ELEV. 744.7

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25									
26		Ver stiff, light grayish brown, slightly moist, very clayey SILT & Saprolite	6	25-26.5	12-13-15	28			
27									
28									
29									
30									
31		SAA, abundant mica	7	30-31.5	25-50/5	Ref			
32									
33									
34									
35									
36		SAA	8	35-36.5	14-35-50/5	Ref			
37									
38									
39									
40									
41		SAA	9	40-41.5	20-29-30	59	Reached water table		
42									
43									
44									
45									
46		SAA	10	45-4.5	10-14-20	34			
47									
48									
49									
50									
51		SAA	11	50-51.5	50/5	Ref			
52		Auger refusal @ 50.5' Begin coring at 50.5'							
53.0 54		Grey, weathered mica SCHIST, iron staining along fractures and relict bedding		50.5-55				77	75
55 56									
57.0 58									
59.0 60		extremely weathered to 60' BOH @ 60'		55-60.0				90	50

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-27
Sheet 1 of 2

SITE: Plant Wansley | HOLE DEPTH: 35.0' | SURF.ELEV.: 699.7
LOCATION: Gypsum Storage Facility | COORDINATES N: 1237224.5 | E: 2029687.5
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA | NO. SAMPLES: 7 | NO. U.D. SAMPLES: 0
CASING SIZE: | LENGTH: | CORE SIZE: | TOTAL % REC.:
WATER TABLE DEPTH: | ELEV.: | TIME AFTER COMP.: | DATE TAKEN:
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 10/3/2006
DRILLER: B. Filipovich | RECORDER: L. Millet | APPROVED: | DRILLING COMP. DATE: 10/3/2006

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0	0	699.70							
	1	Red SILT, dry, stiff, trace mica	1	0-1.5	2-3-4	7			
	2								
	3								
	4								
	5								
	6	Red and tan SILT, schist Saprolite black mottlrd, dry, firm, trace mica	2	5-6.5	2-2-3	5			
	7								
	8								
	9								
	10								
	11	Brown SILT, residual schist form, red and black mottling, moist, including mica content	3	10-11.5	1-2-2	4			
	12								
	13								
	14								
	15								
	16	Brown and yellow-brown fine sandy SILT, saturated, black mottled, ~10% - 15% mica	4	15-16.5	1-1-2	3			
	17								
	18								
	19								
	20								
	21	SAA, schist Saprolite	5	20-21.5	2-2-3	5			
	22								
	23								
	24								

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-27
Sheet 2 of 2

SITE Plant Wansley TOTAL DEPTH 35.0' SURF.ELEV. 699.

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25									
26		Gray SILT and highly decomposed schist Saprolite, brown mottling, wet, quartz vein (1/4") at end of run	6	25-26.5	5-5-12	17			
27									
28									
29									
30									
31		Gray SILT and highly decomposed schist Saprilote occasional black mottling, saturated	7	30-31.5	7-6-13	19			
32									
33									
34									
35		SAA			17-35-50/3	ref			
36		BOH @ 35'							
37									
38									
39									
40									
41									
42									
43									
44									
45									
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-28
Sheet 1 of 3

SITE: Plant Wansley | HOLE DEPTH: 64.0' | SURF.ELEV.: 813.4
LOCATION: Gypsum Storage Facility | COORDINATES N: 1237344.9 | E: 2028007.0
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA | NO. SAMPLES: 11 | NO. U.D. SAMPLES: 2
CASING SIZE: | LENGTH: | CORE SIZE: | TOTAL % REC.:
WATER TABLE DEPTH: | ELEV.: | TIME AFTER COMP.: | DATE TAKEN: 9/12/2006
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 9/12/2006
DRILLER: B. Filipovich | RECORDER: S. Bearce | APPROVED: | DRILLING COMP. DATE: 9/12/2006

	Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0	0	813.40	Surface raked by bulldozer							
	1		approx. 1" of slightly humic red-brown topsoil, else red-brown, very soft CLAY	1	0-1.5	2-3-4	7		25%	
	2									
	3									
	4							UD taken @ 4.0 - 6.0 feet in offset hole		
	5		Reddish brown SILT, schist Saprolite with gray mica plates 4 mm to 1 cm	2	4.5-6	11-12-16	28	moist after 2" rainfall 9/13/06	50%	
	6									
	7									
	8									
	9									
	10		Tan SILT coating of soft gray mica schist Saprolite	3	9.5-11	11-18-24	42	Dry	66%	
	11									
	12							UD taken @ 11.0 - 12.5 feet in offset hole		
	13									
	14									
	15		SAA	4	14.5-16	10-20-24	44	Dry	40%	
	16									
	17									
	18									
	19									
	20		Less tan SILT - mostly soft light gray, olive sheened mica, schist Saprolite	5	19.5-20	12-20-29	49	Dry		
	21									
	22									
	23									
	24									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-28
Sheet 2 of 3

SITE Plant Wansley TOTAL DEPTH 64.0' SURF.ELEV. 81

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25		SAA, tan SILT staining, gray to olive matrix, black MnO oxide stained relic fractures	6	24.5-26	11-16-26	42	Black MnO stained relic fractures		
26									
27									
28									
29									
30		SAA, hard	7	29.5-31	15-55/6	ref	moisture seen on relic fracture faces	100 /12"	
31									
32									
33									
34									
35		SAA, hard	8	34.5-36	18-24-32	56		100%	
36									
37									
38									
39									
40		SAA, all light olive, hard & gray	9	39.5-41	23-35-38	ref	24 hr	50%	
41									
42									
43									
44									
45		SAA, soil damp, hard but spoon saturated - most likely a saturated relic fracture or schistocity	10	44.5-46	25-50/6	ref	saturation @ 45.5'		
46									
47									
48									
49									
50		SAA, Saprolite fully saturated, dark olive brown when fully saturated, hard	11	49.5-51	20-50/5.5	ref	Auger refusal at 50.5' Stopped auger 9/13/06		
51									
52									
53		Set casing/started coring		52.4-54			Start core 9/20/06		
54									
55		Too soft to core - rock/hard soil lenses - resume rotary w/casing & water (not H.S.A.) at 54' Black highly weathered schist		54-56.5	50/4"		easily broken apart laterally - strong vertically		
56									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-28
Sheet 3 of 3

SITE Plant Wansley TOTAL DEPTH 64.0' SURF.ELEV. 813.4

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
57									
58				56.5-59	20 blows no movement		(jumping cathead) 1.5" recovery		
59									
60									
61									
62		Set well @ 62.0'							
63				64	20 blows no movement				
64		BOH @ 64.0'							
65									
66									
67									
68									
69									
70									
71									
72									
73									
74									
75									
76									
77									
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86									
87									
88									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-29
Sheet 1 of 2

SITE: Plant Wansley | HOLE DEPTH: 50.0' | SURF.ELEV.: 746.7
LOCATION: Gypsum Storage Facility | COORDINATES N: 1236554.0 | E: 2028298.2
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA | NO. SAMPLES: 11 | NO. U.D. SAMPLES: 0
CASING SIZE: | LENGTH: | CORE SIZE: | TOTAL % REC.:
WATER TABLE DEPTH: | ELEV.: | TIME AFTER COMP.: | DATE TAKEN: 9/14/2006
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 9/14/2006
DRILLER: B. Filipovich | RECORDER: S. Bearce | APPROVED: | DRILLING COMP. DATE: 9/14/2006

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0 0	746.70								
1			1						
2									
3									
4		Red silty, clayey SAND (SM), stiff, with mixtured relict quartz grain, fine-medium, and biotite fine to coarse, highly weathered Saprolite or colluvium mixture; damp	2	3-4.5	5-6-6	12	LL=43 PI=12 gravel - 7.2% sand - 48.5% silt - 23.9% clay - 20.4% Bulk sample taken 6.0 to 8.0 ft	30%	
5									
6									
7									
8									
9		Firm, mottled, red-brown silty SAND/sandy SILT and yellow-brown SILT, with traces of biotite and relict metamorphic bonding; damp	3	8-9.5	3-4-5	9		50%	
10									
11									
12									
13									
14		Firm, silvery, light gray to olive sandy SILT (ML), with relict muscovite schist Saprolite, texture very apparent and very thin black streaks; dry	4	13-14.5	2-4-8	12	non-plastic gravel - 1.3% sand - 43.4% silt - 49.1% clay - 6.2%	100%	
15									
16									
17									
18				18-19.5	3-3-6	9			
19		dry	5						
20									
21									
22									
23		Firm, band light olive (2") w/2" of red-brown 2" of lt. olive SILT as above and relic					fracture wet @ 23.0'		
24		schist textures in each section, relic fractures cross-cut relic schistocity and have black MnO coating	6	23-24.5	2-3-5	8	soil is moist		

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-29
Sheet 2 of 2

SITE Plant Wansley TOTAL DEPTH 50.0' SURF.ELEV. 746.

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25									
26									
27									
28									
29		Very stiff, light olive silt & clay mixture (ML-CL), maybe some graphite mixed in, schistocity present, highly weathered rock	7	28-29.5	6-9-11	20	water on spoon moist soil soil very slippery when rubbed between fingers		
30									
31									
32									
33									
34		Stiff, reddish brown SILT, one black MnO filled fracture (relic), other rock fabrics absent; wet	8	33-34.5	7-6-8	14	wet		
35									
36									
37									
38		Hard, weathered schist Saprolite w/abundant muscovite, graphite and silty SAND (SM) (white & red) from weathered feldspar, relic fractures w/black MnO coating and fill organics; moist	9	38-39.5	13-36-50/5"	ref	non-plastic gravel - 8.9% sand - 59.1% silt - 28.0% clay - 4.0%		
39									
40									
41									
42									
43									
44			10	43-44.5	16-25-50/6"	ref	over weekend came back and had 15' of water		
45									
46									
47									
48									
49		Hard, brown Saprolite, flakey-micaceous with silty sand properties	11	48-49.5	50/5"	ref	20' water set well		
50		BOH @ 50.0'							
51									
52									
53									
54									
55									
56									

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DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-30
Sheet 1 of 2

SITE: Plant Wansley | HOLE DEPTH: 56.5' | SURF.ELEV.: 714.6
LOCATION: Gypsum Storage Facility | COORDINATES N: 1236619.1 | E: 2028993.8
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA | NO. SAMPLES: 10 | NO. U.D. SAMPLES: 0
CASING SIZE: | LENGTH: | CORE SIZE: | TOTAL % REC.:
WATER TABLE DEPTH: | ELEV.: | TIME AFTER COMP.: | DATE TAKEN: 9/19/2006
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 9/19/2006
DRILLER: B. Filipovich | RECORDER: R. Mudd | APPROVED: | DRILLING COMP. DATE: 9/19/2006

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0 0	714.60								
1		Organics top 3"	1	0-1.5	1-2-3	5	Rain last night		
2		Red SILT, medium stiff, moist							
3									
4									
5									
6		Sandy, red & tan mottled SILT, medium stiff, moist	2	5-6.5	2-4-5	9			
7									
8									
9									
10									
11		Sandy, mottled orange & tan SILT, fine sand portion, soft, moist	3	10-11.5	1-2-2	4			
12									
13									
14									
15									
16		Light tan SILT w/interbedded layers of white weathered schist, large angular quartz pebble included, very soft, moist	4	15-16.5	WOH-WOH-1	1			
17									
18									
19									
20									
21		Tan sandy SILT with fine to medium sand portion, pieces of weathered rock, some as large as small pebbles & black in color, soft & very wet	5	20-21.5	1-1-2	3	water table at 20'		
22									
23									
24									

Form GS9901 7-26-2004

SOUTHERN COMPANY
Energy to Serve Your World

DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-30
Sheet 2 of 2

SITE Plant Wansley TOTAL DEPTH 56.5' SURF.ELEV. 714.

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25									
26		Light tan sandy SILT w/black weathered schist intrusions, some mica flecks, medium stiff, moist	6	25-26.5	3-4-7	11			
27									
28									
29									
30									
31		SAA, with white schist layers	7	30-31.5	5-6-10	16			
32									
33									
34									
35									
36		Gray & tan sandy SILT, w/mica intrusions, weathered in place with obvious bedding planes (Saprolite), very stiff, moist	8	35-36.5	5-9-22	31			
37									
38									
39									
40									
41		Layered red, yellow, orange SILT, very stiff, moist-bedding planes	9	40-41.5	8-19-50	69			
42									
43									
44									
45		Set well @ 44.5'							
46		Clayey SILT Interbedded, layered orange, red, yellow & white heavily weathered Saprolite, very stiff, moist	10	45-46.5	18-50/3"	ref			
47									
48		BOH @ 46.5'							
49									
50									
51									
52									
53									
54									
55									
56									

SOUTHERN COMPANY
Energy to Serve Your World

DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-31
Sheet 1 of 1

SITE: Plant Wansley | HOLE DEPTH: 43.5' | SURF.ELEV.: 843.5
LOCATION: Gypsum Storage Facility | COORDINATES N: 1237996.6 | E: 2025212.8
ANGLE: | BEARING: | CONTRACTOR: SCS | DRILL NO.: CME 550
DRILLING METHOD: HSA/HQ Core | NO. SAMPLES: 5 | NO. U.D. SAMPLES: 0
CASING SIZE: | LENGTH: | CORE SIZE: HQ | TOTAL % REC.: 99%
WATER TABLE DEPTH: 15.0' | ELEV.: | TIME AFTER COMP.: 24 hrs | DATE TAKEN:
TYPE GROUT: | QUANTITY: | MIX: | DRILLING START DATE: 10/21/2006
DRILLER: S. Milam | RECORDER: K. Hobbs | APPROVED: | DRILLING COMP. DATE: 10/21/2006

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
0.0 0	843.50								
1									
2		Light brown/reddish sandy SILT, organic matter, stiff	1	1-2.5	5-4-6	10			
3									
4									
5		Very stiff, buff. SILT							
6			2	4.5-6	11-13-13	26			
7									
8									
9									
10		Very stiff, yellowish orange SILT , relic gneissic features							
11			3	9.5-11	8-9-8	17			
12									
13									
14									
15		Medium stiff, yellowish orange SILT, gneissic banding, dark oxidized stains							
16			4	14.5-16	4-4-5	9			
17									
18									
19									
20		Buff Saprolite with gneissic mineral bands, stiff, sandy SILT							
21			5	19.5-21	7-6-13	19			
22									
23									
24		TOR @ 23.5'							

Form GS9901 7-26-2004

SOUTHERN COMPANY
Energy to Serve Your World

DRILLING LOG
GEOLOGICAL SERVICES

Hole No. GS-31
Sheet 2 of 2

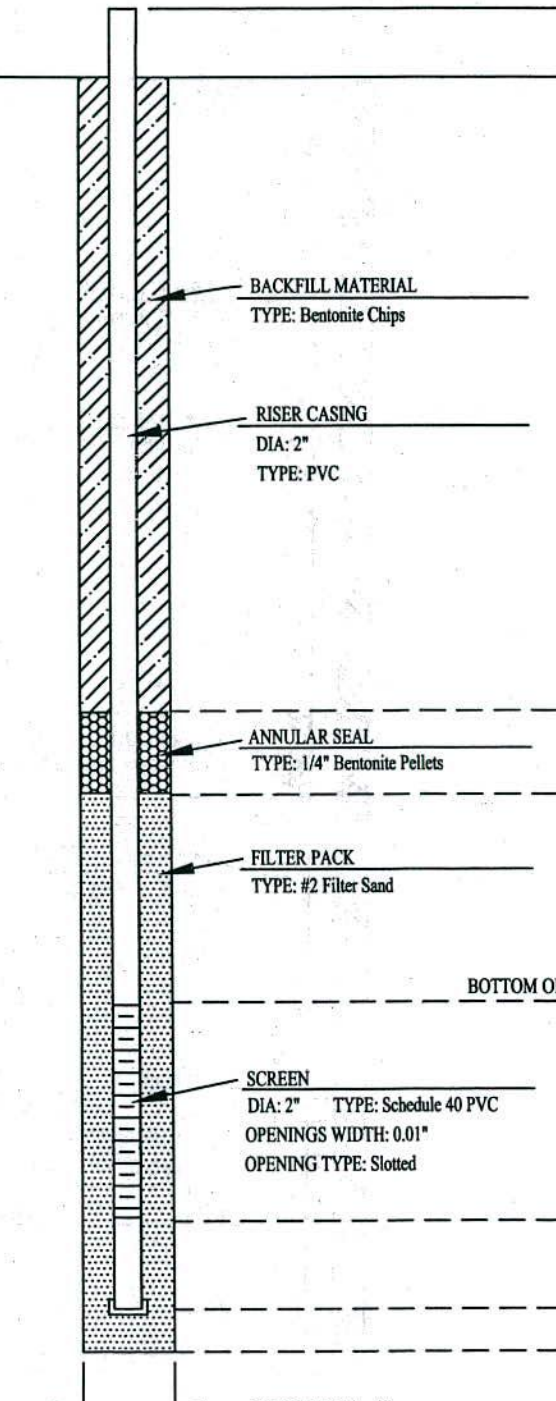
SITE Plant Wansley TOTAL DEPTH 43.5' SURF.ELEV. 845'

Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard Penetration Test From To	Blows	N	Comments	% Rec	RQD
25		Pink and gray, hard, slightly weathered granitic GNEISS		23.5-28.5				98	90
26									
27									
28									
29		iron staining along fractures							
30									
31				28.5-33.5				100	92
32									
33									
34									
35				33.5-38.5				100	70
36									
37									
38									
39									
40									
41				38.5-43.5				100	75
42									
43									
44		BOH @ 43.5'							
45									
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									

WELL CONSTRUCTION LOG

Southern Company Generation

ect: Gypsum Storage Facility ation: Plant Wansley Elevation: Logger: A. Grissom Dates drilled: 10/17/06	Drilling Co: SCS Driller: M. Hughes Rig type: CME 550 Drilling method: HSA/HQ Sampling methods: SPT & Core No. SPT: 8 No. UD: Total depth: 54.7'	Page 1 of 1	Well Name GS-1



	DEPTH	ELEV.
TOP OF CASING	-2.6	850.3
GROUND SURFACE	0.0	847.7
TOP OF SEAL	NA	NA
TOP OF FILTER PACK	38.7	809.0
BOTTOM OF RISER/TOP OF SCREEN	39.7	808.0
BOTTOM OF SCREEN	49.7	798.0
BOTTOM OF CASING	54.7	793.0
BOTTOM OF HOLE	54.7	793.0

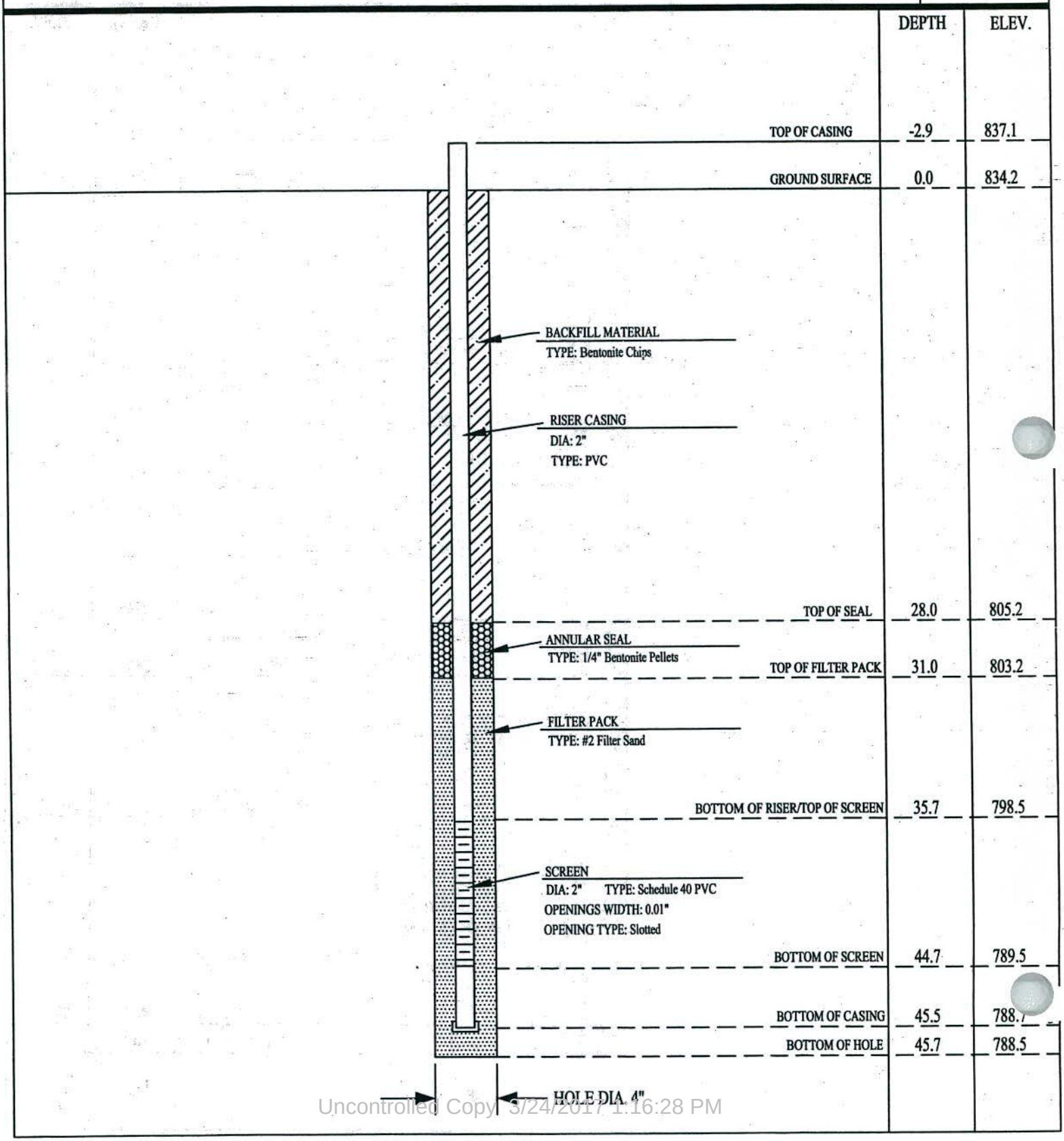
WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility
Location: Plant Wansley
Elevation:
Logger: S. Bearce
Dates drilled: 10/23/06 to 10/24/06

Drilling Co: SCS
Driller: S. Milam
Rig type: CME 550
Drilling method: HSA/HQ
Sampling methods: SPT & Core
No. SPT: 5 No. UD: Total depth: 45.7'

Well Name: GS-2



	DEPTH	ELEV.
TOP OF CASING	-2.9	837.1
GROUND SURFACE	0.0	834.2
TOP OF SEAL	28.0	805.2
TOP OF FILTER PACK	31.0	803.2
BOTTOM OF RISER/TOP OF SCREEN	35.7	798.5
BOTTOM OF SCREEN	44.7	789.5
BOTTOM OF CASING	45.5	788.7
BOTTOM OF HOLE	45.7	788.5

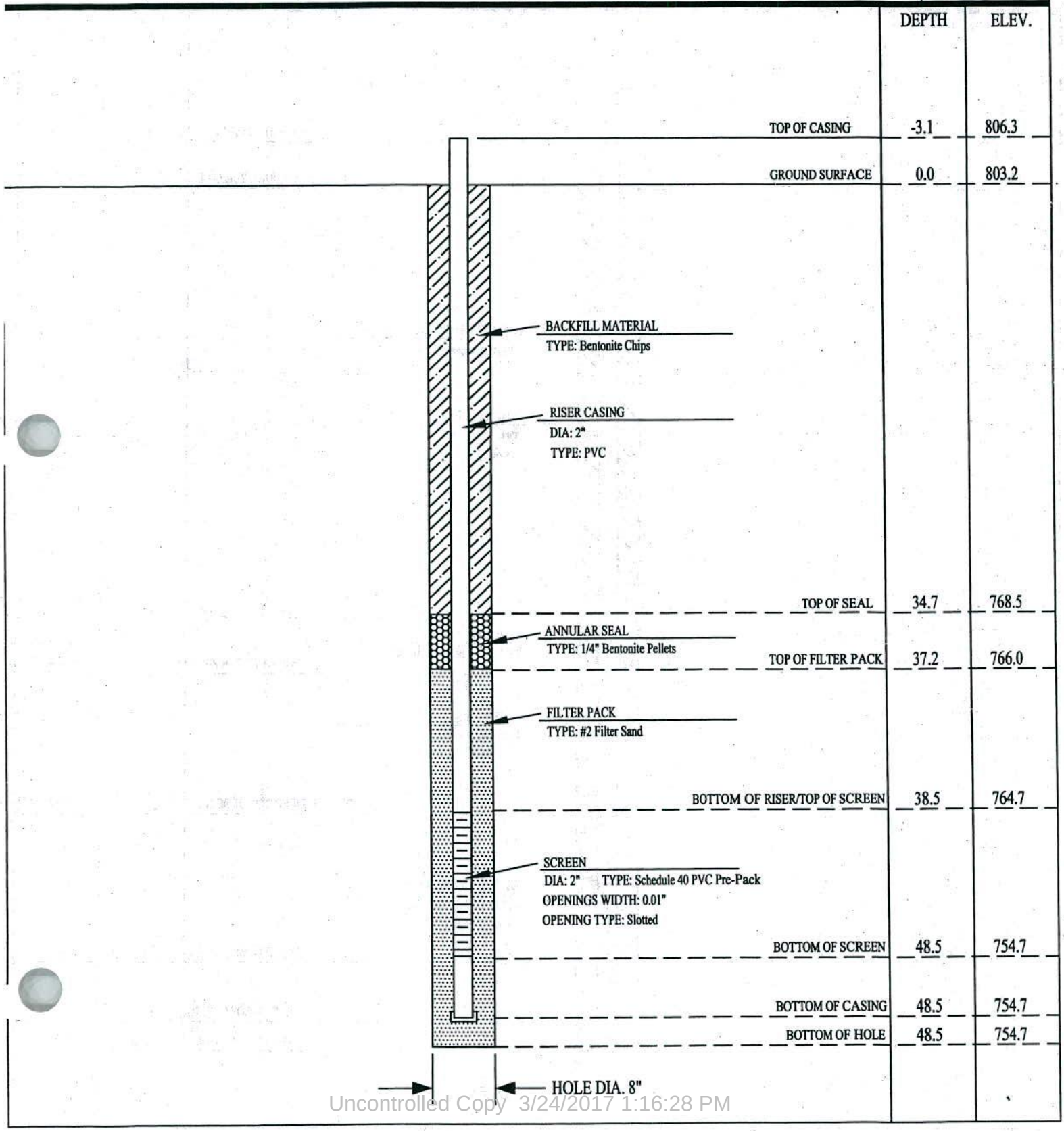
WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility
Location: Plant Wansley
Elevation:
Logger: K. Hobbs
Dates drilled: 10/23/06

Drilling Co: SCS
Driller: M. Hughes
Rig type: CME 550
Drilling method: HSA
Sampling methods: SPT
No. SPT: 5 No. UD: Total depth: 48.5'

Well Name
GS-3



	DEPTH	ELEV.
TOP OF CASING	-3.1	806.3
GROUND SURFACE	0.0	803.2
TOP OF SEAL	34.7	768.5
TOP OF FILTER PACK	37.2	766.0
BOTTOM OF RISER/TOP OF SCREEN	38.5	764.7
BOTTOM OF SCREEN	48.5	754.7
BOTTOM OF CASING	48.5	754.7
BOTTOM OF HOLE	48.5	754.7

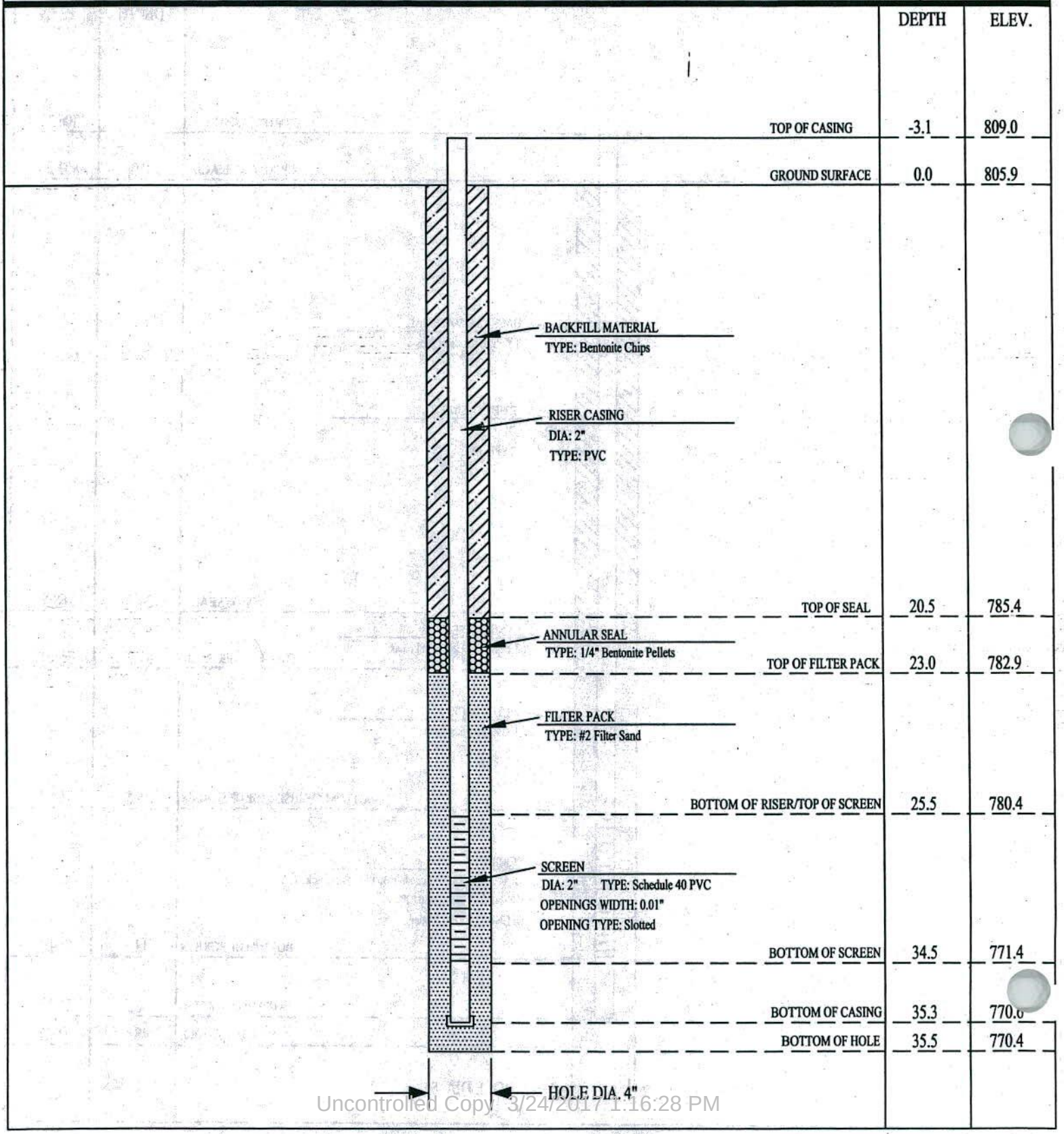
WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility
Location: Plant Wansley
Elevation:
Logger: K. Hobbs
Dates drilled: 10/25/06

Drilling Co: SCS
Driller: S. Milam
Rig type: CME 550
Drilling method: HSA/HQ
Sampling methods: SPT & Core
No. SPT: 5 No. UD: Total depth: 35.5'

Well Na
GS-4



	DEPTH	ELEV.
TOP OF CASING	-3.1	809.0
GROUND SURFACE	0.0	805.9
TOP OF SEAL	20.5	785.4
TOP OF FILTER PACK	23.0	782.9
BOTTOM OF RISER/TOP OF SCREEN	25.5	780.4
BOTTOM OF SCREEN	34.5	771.4
BOTTOM OF CASING	35.3	770.6
BOTTOM OF HOLE	35.5	770.4

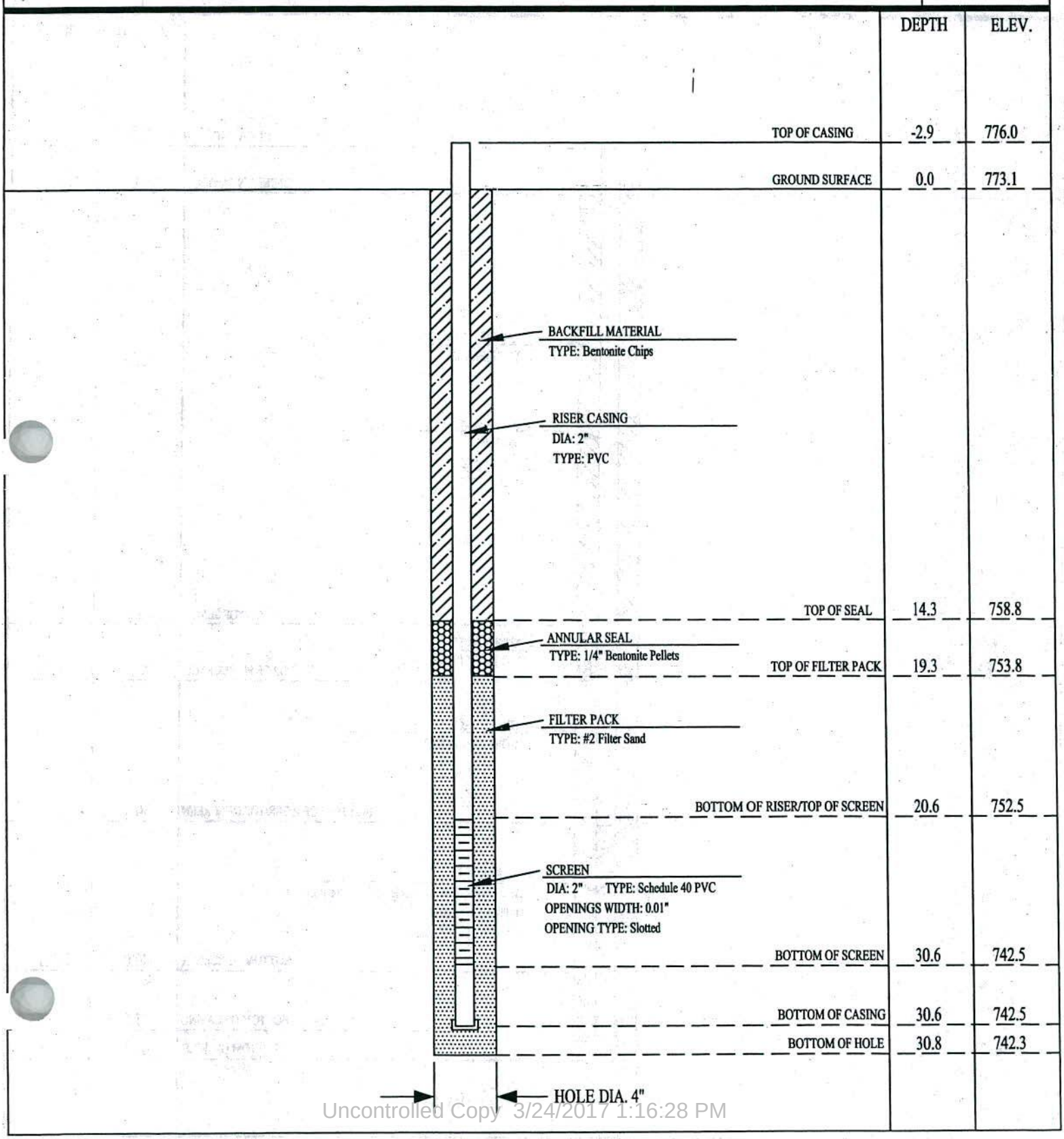
WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility
Location: Plant Wansley
Elevation:
Logger: K. Hobbs
Dates drilled: 10/22/06

Drilling Co: SCS
Driller: M. Hughes
Rig type: CME 550
Drilling method: HSA/HQ Core
Sampling methods: SPT & Core
No. SPT: 5 No. UD: Total depth: 30.8'

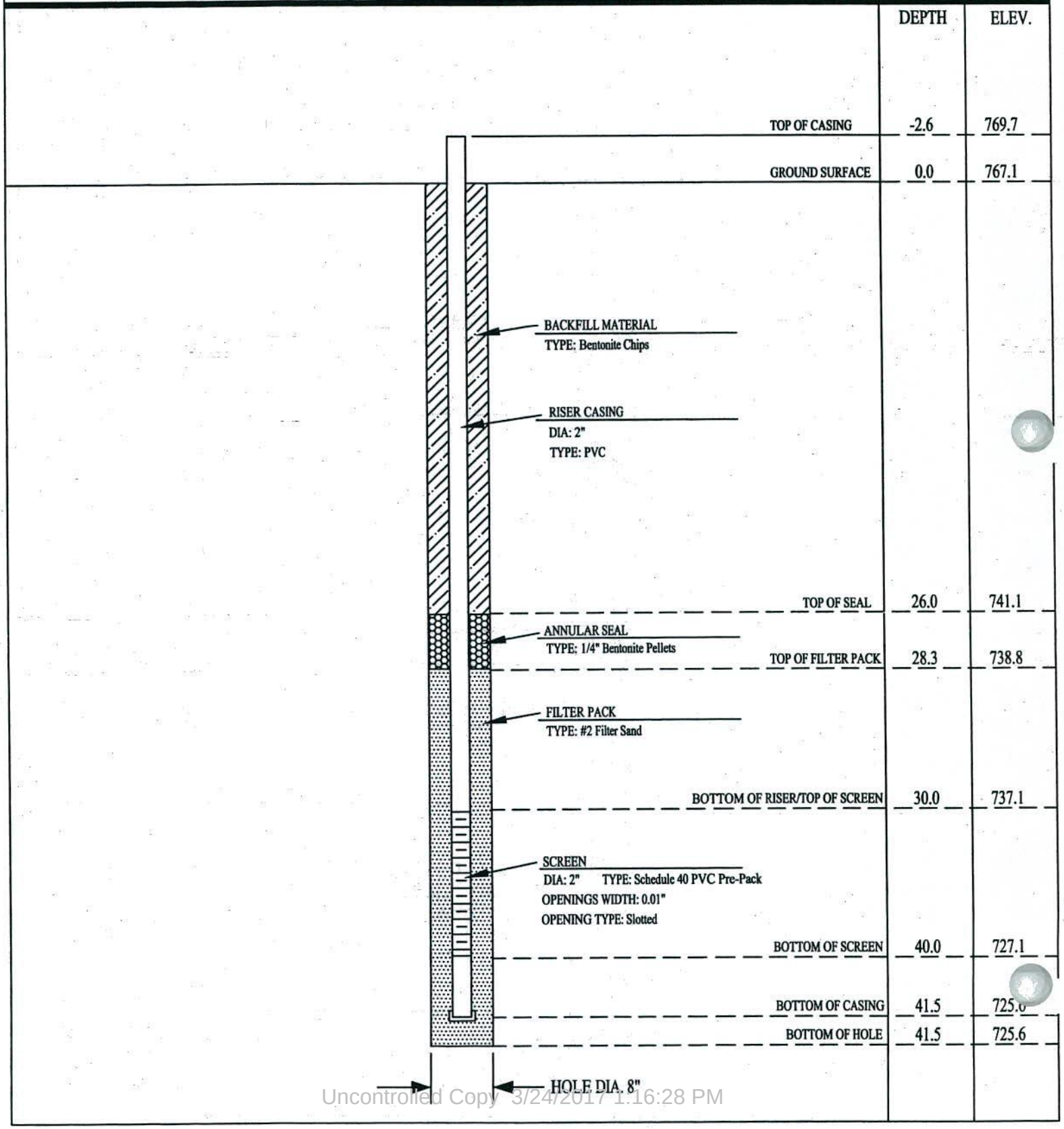
Well Name
GS-5



WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility Location: Plant Wansley Elevation: Logger: Dates drilled: 10/21/06	Drilling Co: SCS Driller: M. Hughes Rig type: CME 550 Drilling method: HSA Sampling methods: SPT No. SPT: No. UD: Total depth: 41.5'	Page 1 of 1	Well Name GS-6



WELL CONSTRUCTION LOG

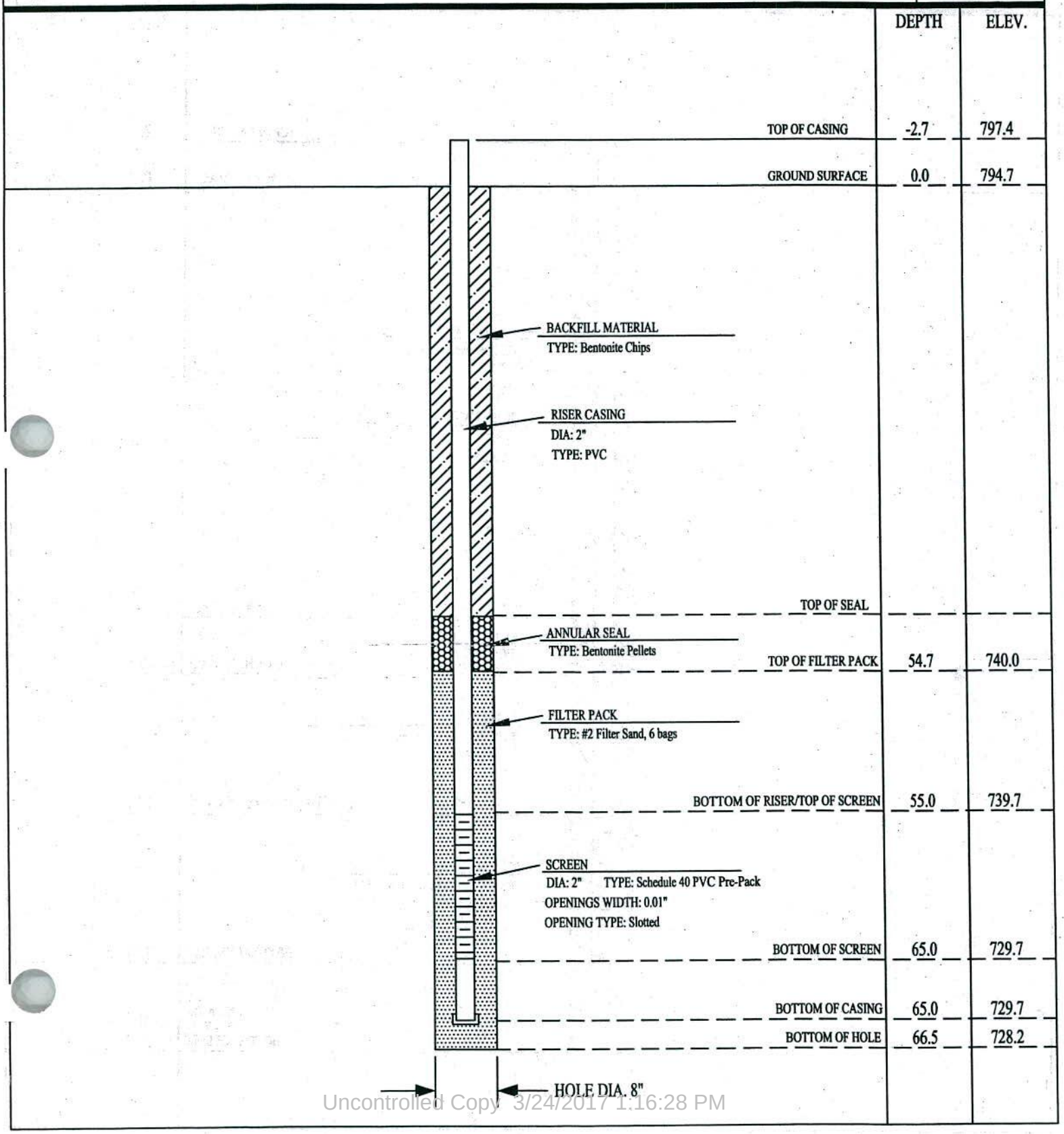
Southern Company Generation

ct: Gypsum Storage Facility
ion: Plant Wansley
Elevation:
Logger: R. Mudd
Dates drilled: 10/11/06

Drilling Co: SCS
Driller: M. Hughes
Rig type: CME 550
Drilling method: HSA
Sampling methods: SPT
No. SPT: No. UD: Total depth: 66.5'

Page 1 of 1

Well Name
GS-7



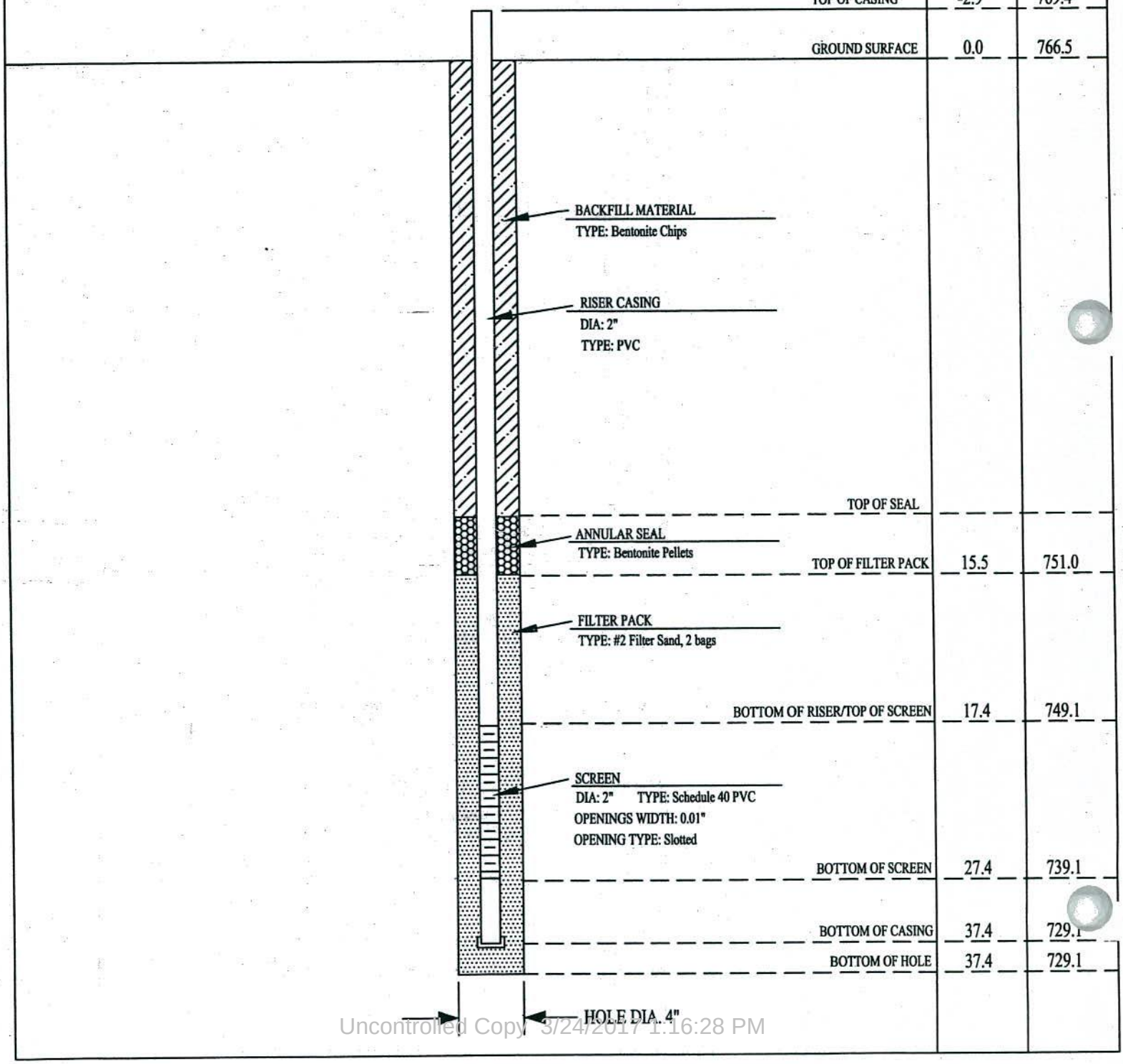
WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility
Location: Plant Wansley
Elevation:
Logger: R. Mudd
Dates drilled: 10/12/06

Drilling Co: SCS
Driller: S. Milam
Rig type: CME 550
Drilling method: HSA/HQ
Sampling methods:
No. SPT: No. UD: Total depth: 37.4'

Well Name
GS-8



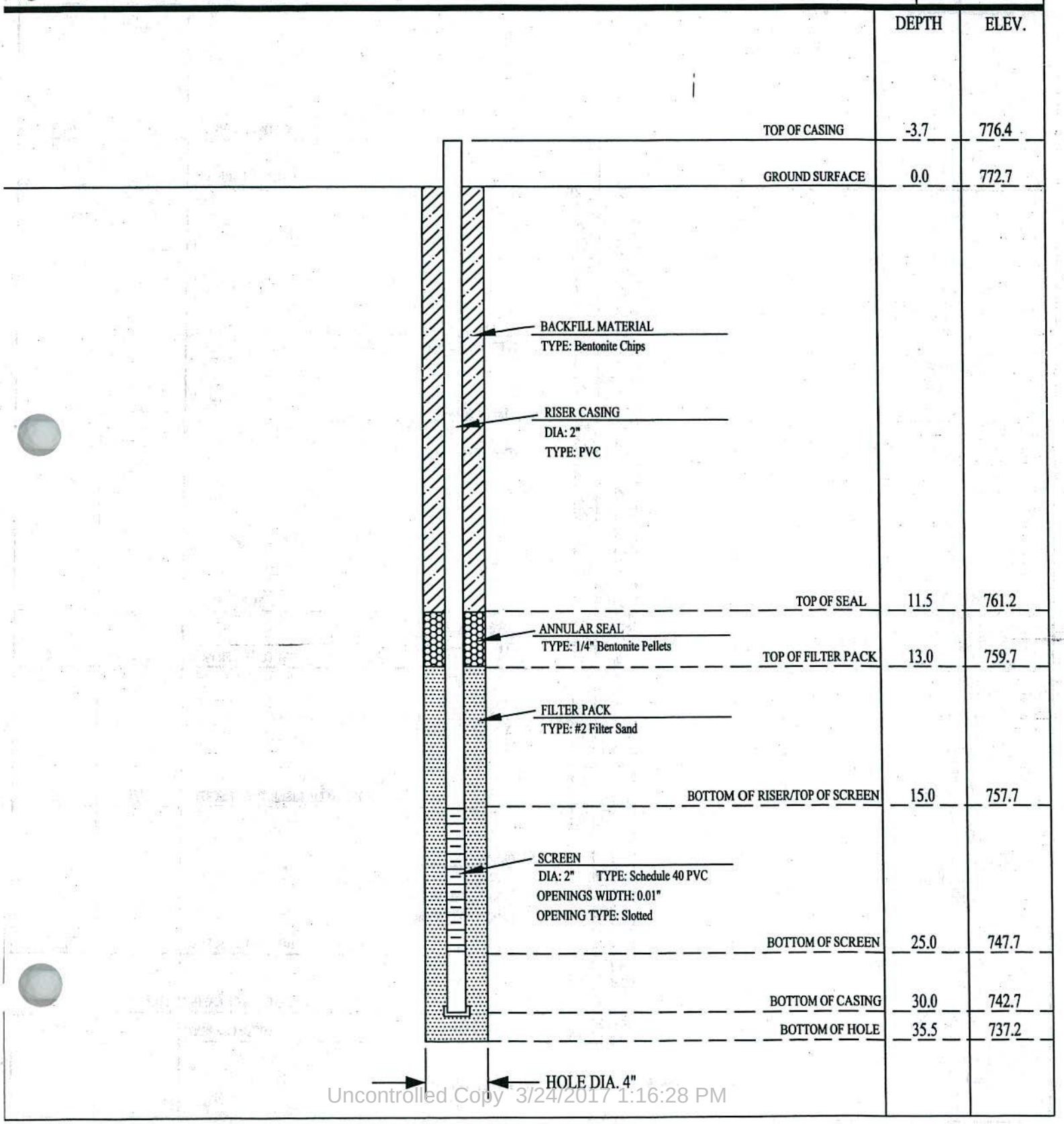
WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility
Location: Plant Wansley
Elevation:
Logger: R. Mudd
Dates drilled: 10/12/06

Drilling Co: SCS
Driller: S. Milam
Rig type: CME 550
Drilling method: HSA/HQ Core
Sampling methods: SPT
No. SPT: 4 No. UD: Total depth: 35.5'

Well Name
GS-9



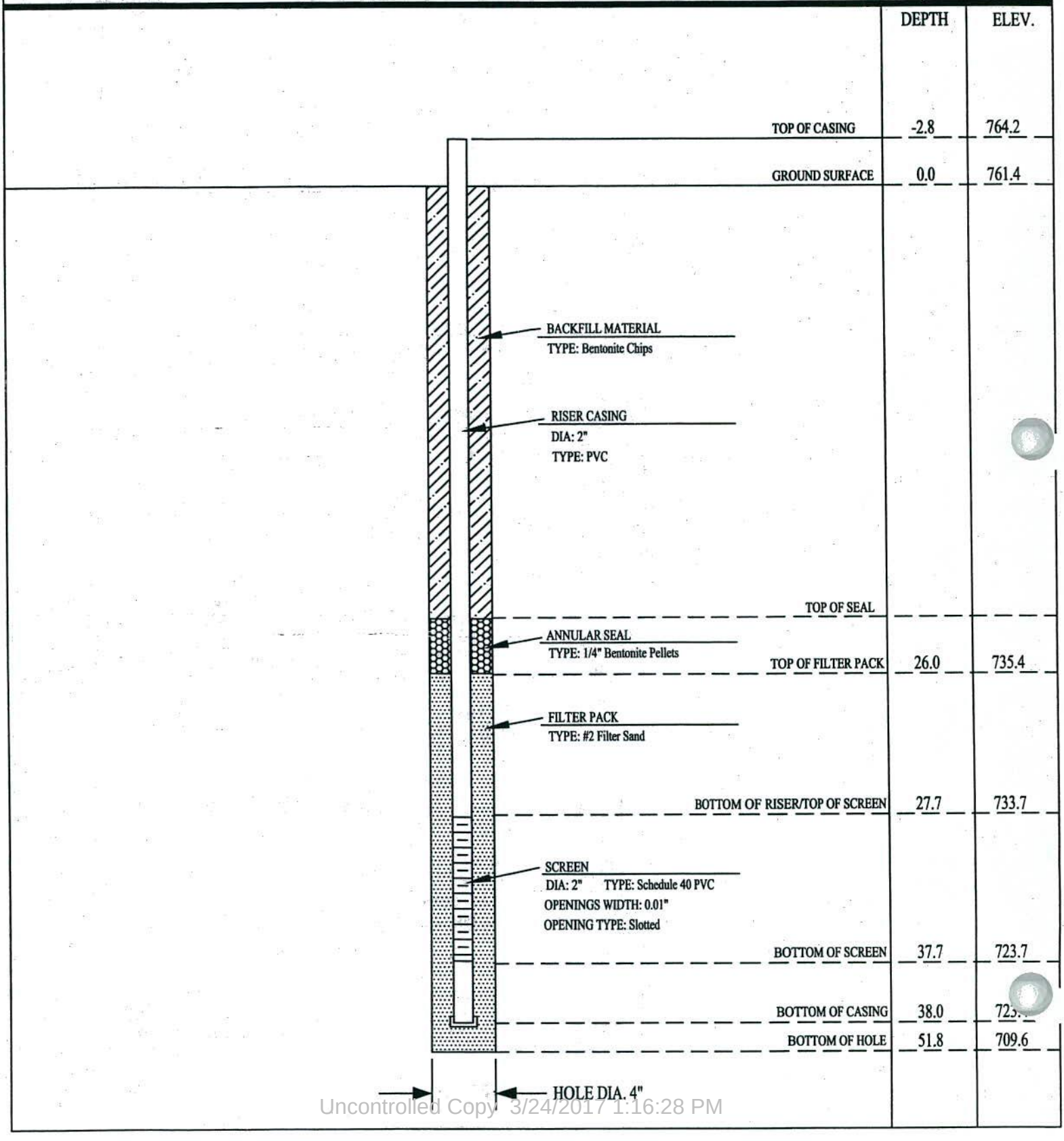
WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility
Location: Plant Wansley
Elevation:
Logger:
Dates drilled: 10/21/06

Drilling Co: SCS
Driller: M. Hughes
Rig type: CME 550
Drilling method: HSA/HQ
Sampling methods: SPT & Core
No. SPT: No. UD: Total depth: 51.8'

Well Name: GS-10



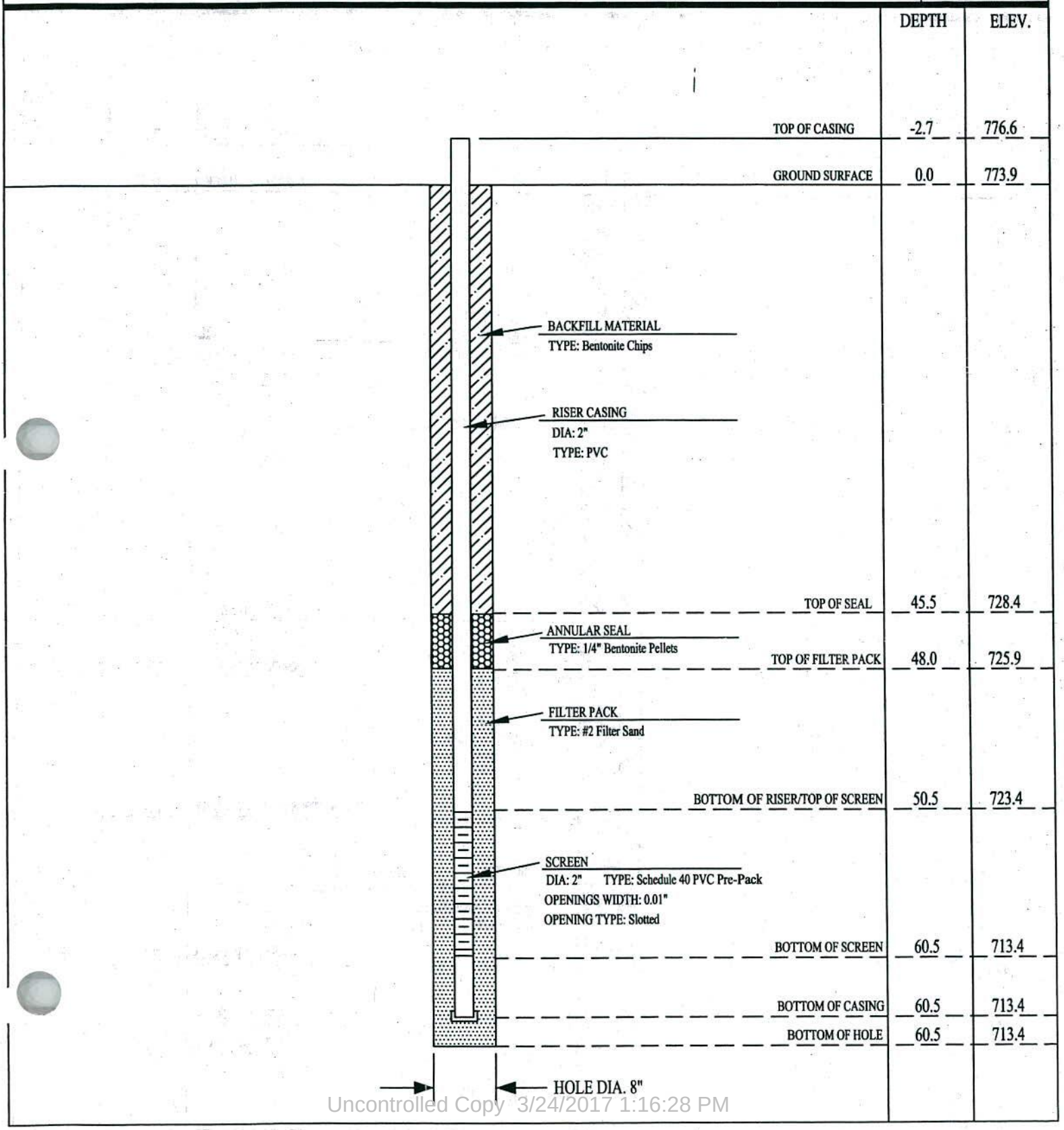
WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility
Location: Plant Wansley
Elevation:
Logger: G. McWhorter
Dates drilled: 10/20/06

Drilling Co: SCS
Driller: S. Milam
Rig type: CME 550
Drilling method: HSA
Sampling methods: SPT
No. SPT: 13 No. UD: Total depth: 60.5'

Well Name
GS-11



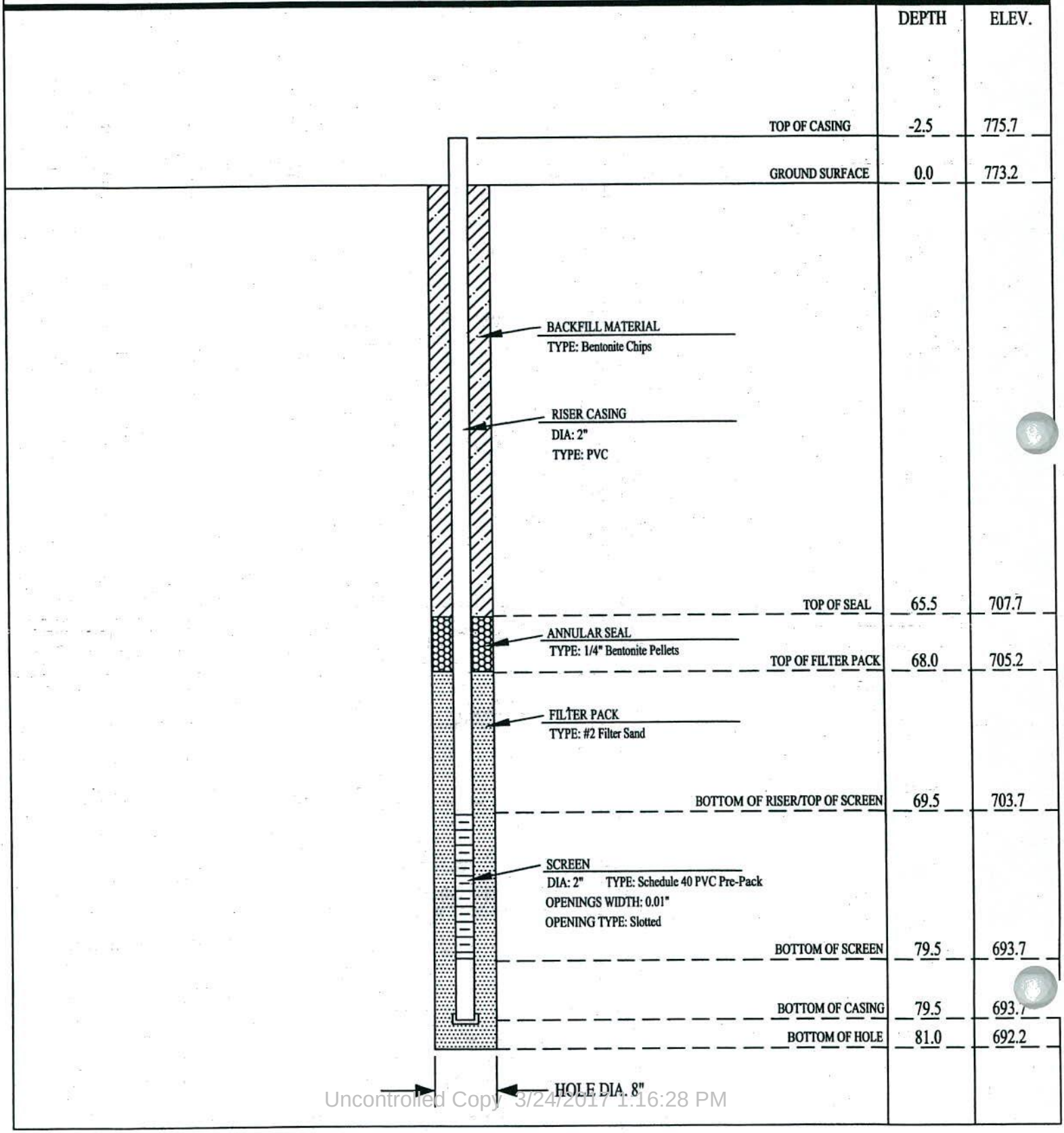
WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility
Location: Plant Wansley
Elevation:
Logger: G. McWhorter
Dates drilled: 10/19/06

Drilling Co: SCS
Driller: S. Milam
Rig type: CME 550
Drilling method: HSA
Sampling methods: SPT
No. SPT: 17 No. UD: Total depth: 81.0'

Well Name
GS-12



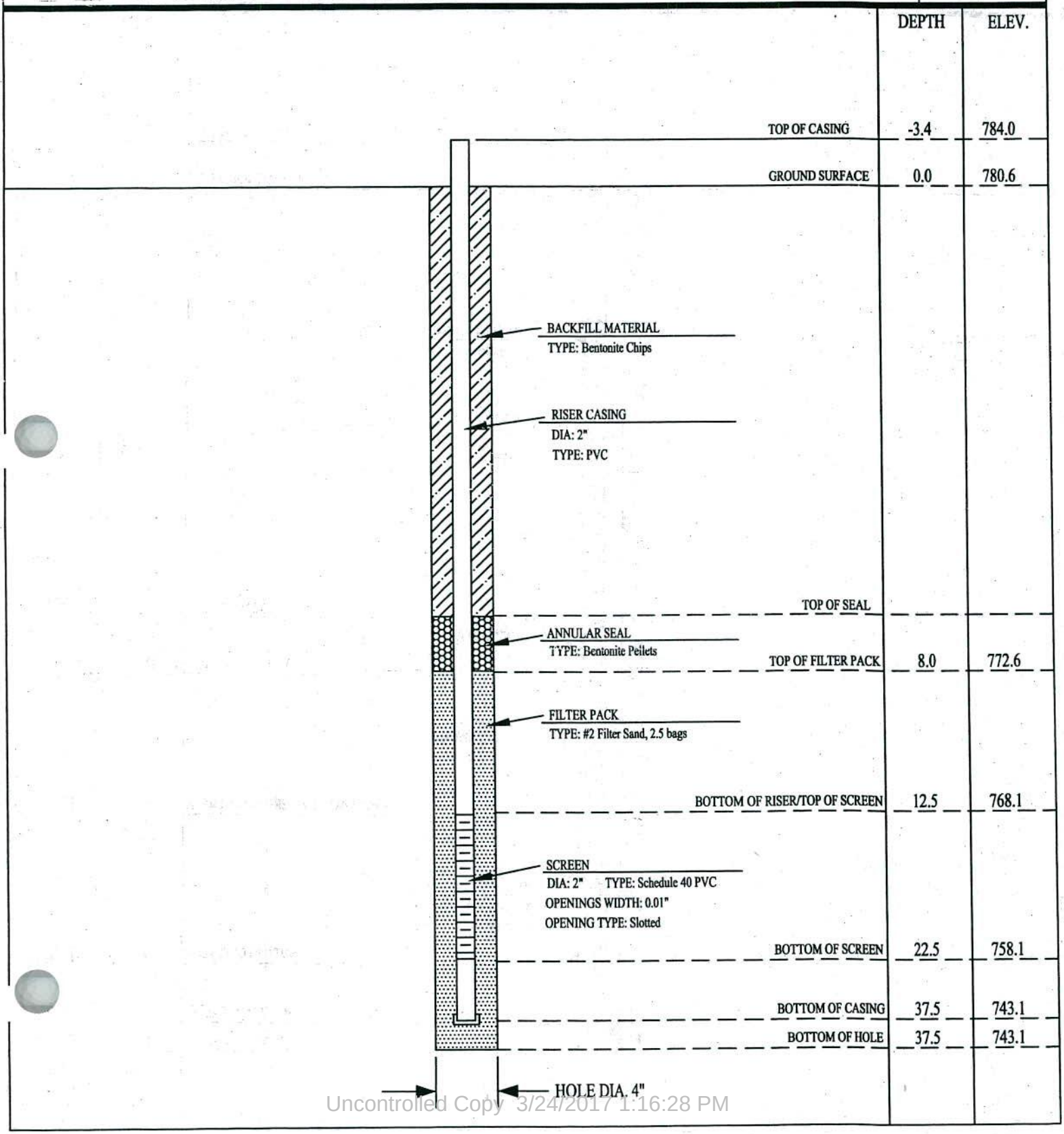
WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility
Location: Plant Wansley
Elevation:
Logger: R. Mudd
Dates drilled: 10/10/06

Drilling Co: SCS
Driller: M. Hughes
Rig type: CME 550
Drilling method: HSA/HQ Core
Sampling methods: SPT & Core
No. SPT: No. UD: Total depth: 37.5'

Well Name
GS-13



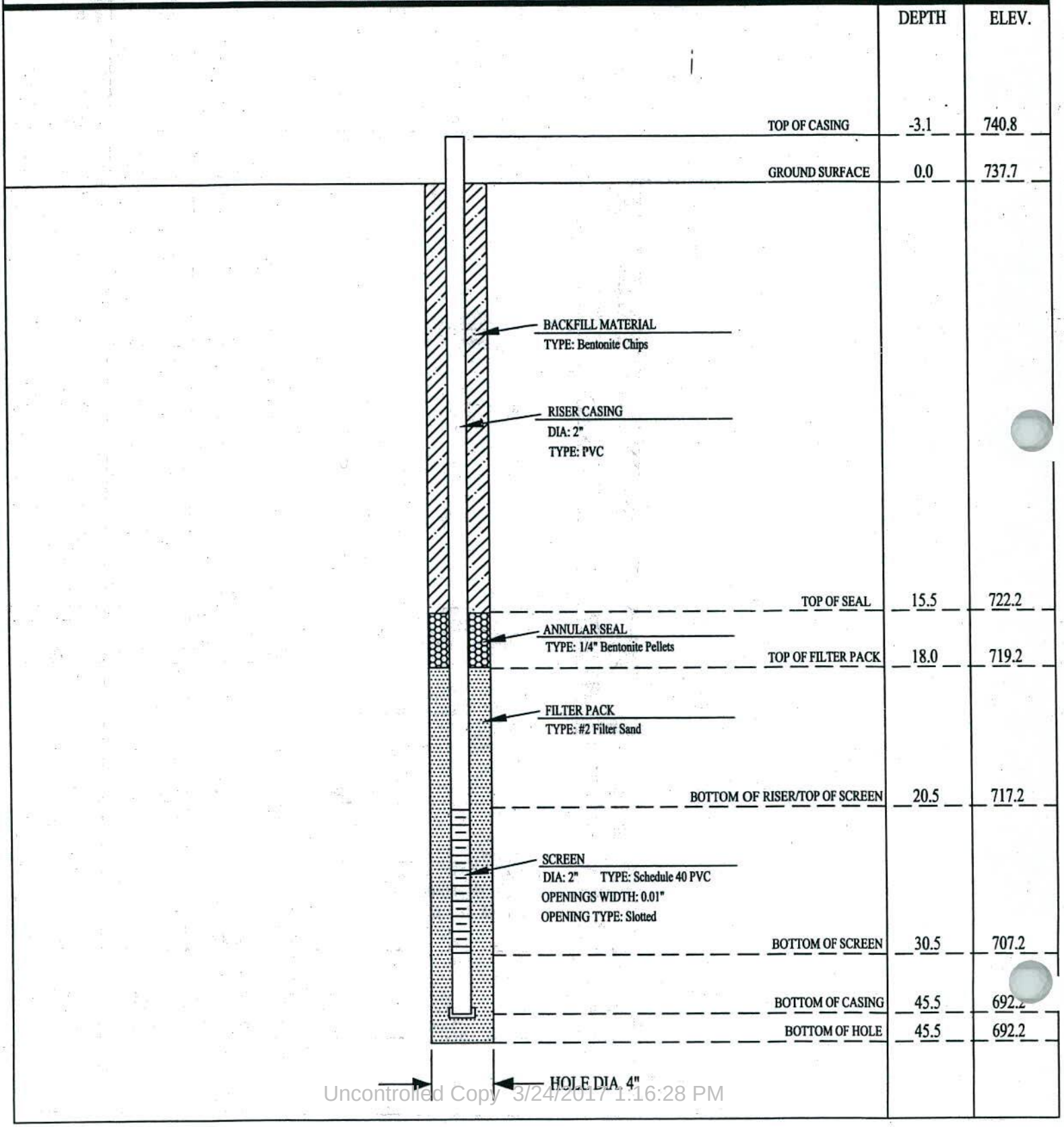
WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility
Location: Plant Wansley
Elevation:
Logger: G. McWhorter
Dates drilled: 10/19/06

Drilling Co: SCS
Driller: S. Milam
Rig type: CME 550
Drilling method: HSA/HQ Core
Sampling methods: SPT
No. SPT: 2 No. UD: Total depth: 45.5'

Well Name
GS-14



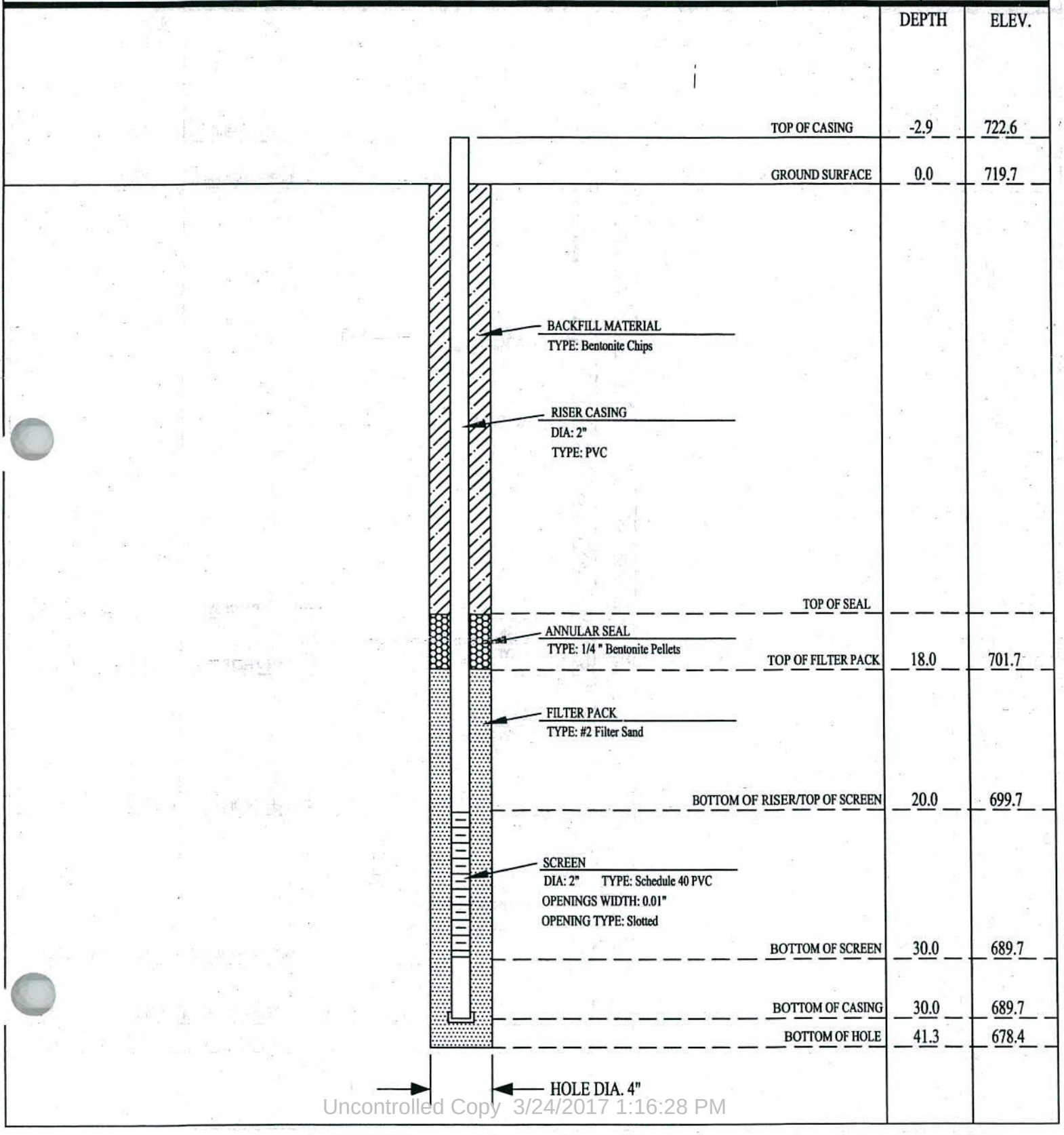
WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility
Location: Plant Wansley
Elevation:
Logger:
Dates drilled: 10/20/06

Drilling Co: SCS
Driller: B. Filipovich
Rig type: CME 550
Drilling method: HSA/HQ Core
Sampling methods: SPT & Core
No. SPT: No. UD: Total depth: 41.3'

Well Name
GS-15



	DEPTH	ELEV.
TOP OF CASING	-2.9	722.6
GROUND SURFACE	0.0	719.7
TOP OF SEAL		
TOP OF FILTER PACK	18.0	701.7
BOTTOM OF RISER/TOP OF SCREEN	20.0	699.7
BOTTOM OF SCREEN	30.0	689.7
BOTTOM OF CASING	30.0	689.7
BOTTOM OF HOLE	41.3	678.4

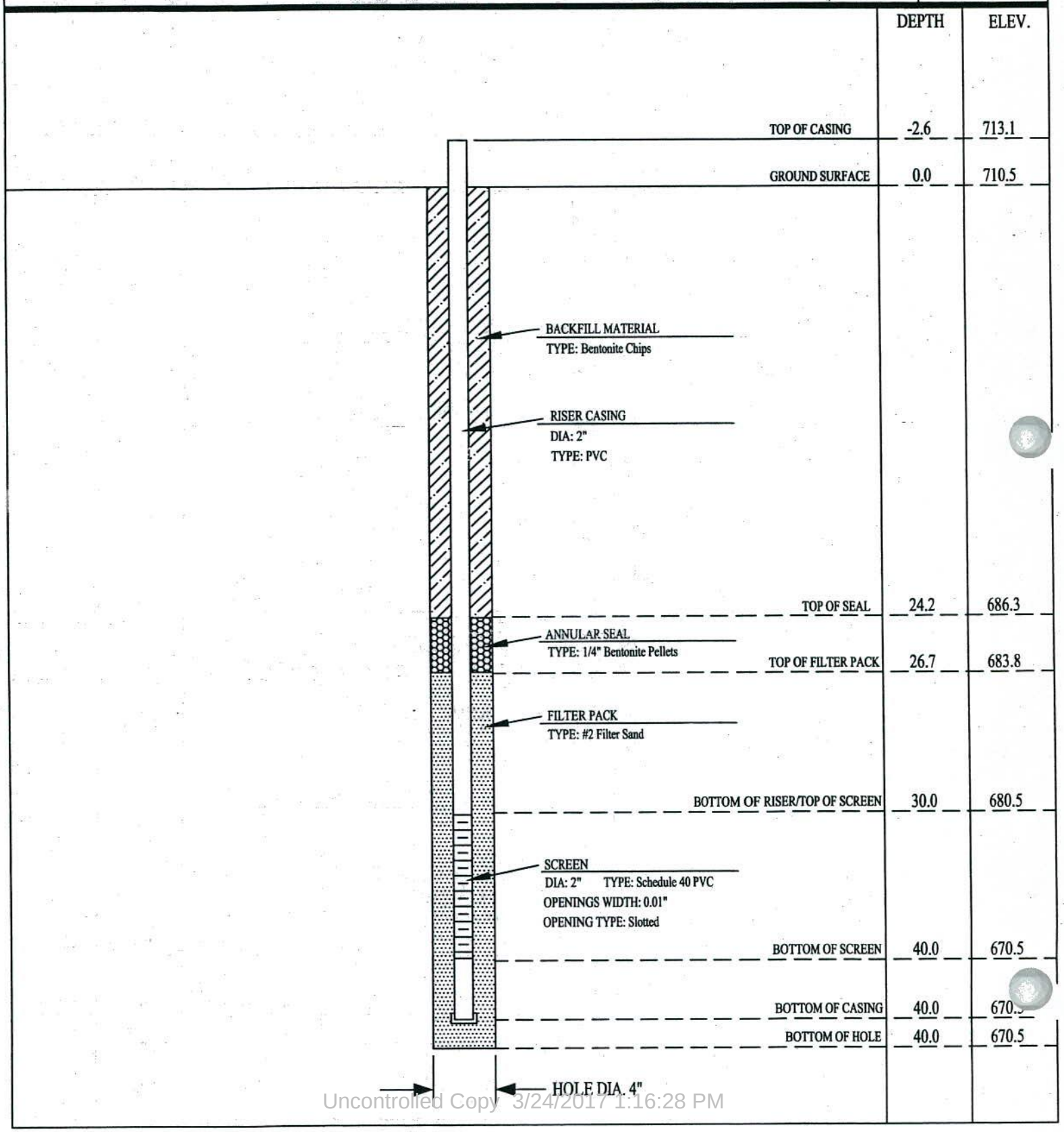
WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility
Location: Plant Wansley
Elevation:
Logger:
Dates drilled:

Drilling Co: SCS
Driller: M. Hughes
Rig type: CME 550
Drilling method: HSA/HQ
Sampling methods: SPT & Core
No. SPT: No. UD: Total depth: 40.0'

Well Name: GS-16



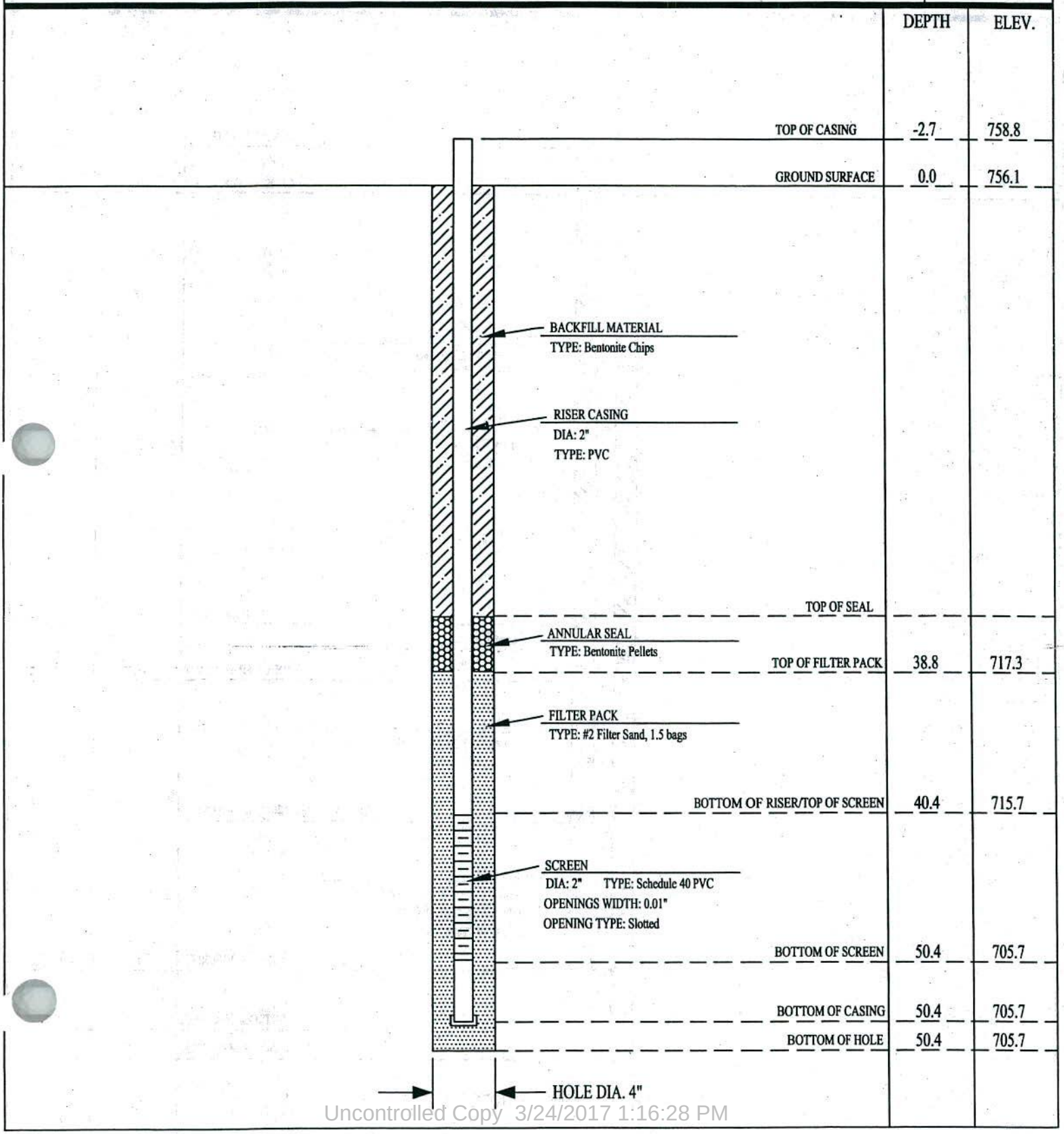
WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility
Location: Plant Wansley
Elevation:
Logger: L. Millet/R. Mudd
Dates drilled: 10/5/06 to 10/9/06

Drilling Co: SCS
Driller: B. Filipovich
Rig type: CME 550
Drilling method: HSA to 30', Rock core to 50.4'
Sampling methods:
No. SPT: No. UD: Total depth: 50.4'

Well Name
GS-17



	DEPTH	ELEV.
TOP OF CASING	-2.7	758.8
GROUND SURFACE	0.0	756.1
TOP OF SEAL		
TOP OF FILTER PACK	38.8	717.3
BOTTOM OF RISER/TOP OF SCREEN	40.4	715.7
BOTTOM OF SCREEN	50.4	705.7
BOTTOM OF CASING	50.4	705.7
BOTTOM OF HOLE	50.4	705.7

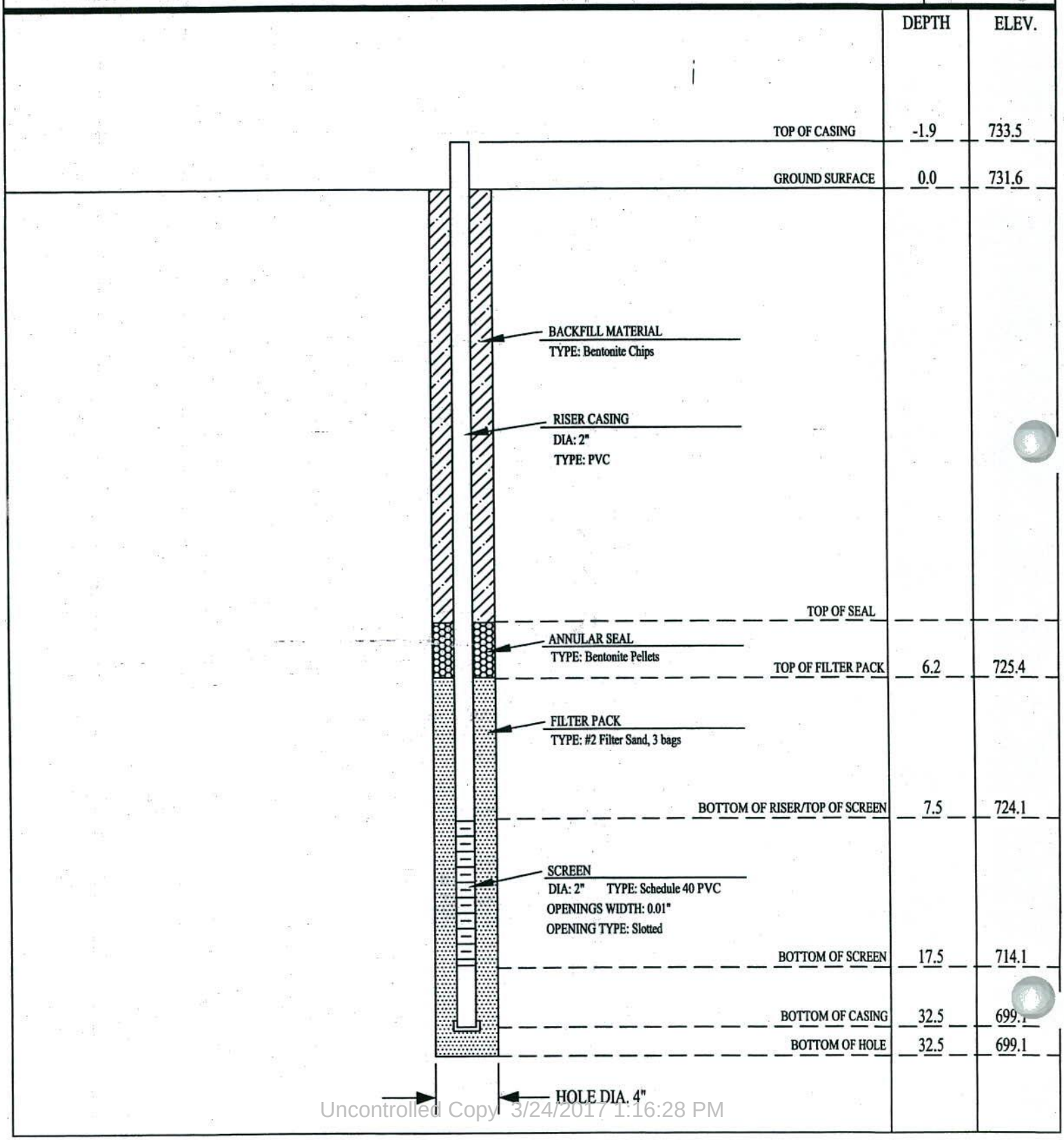
WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility
Location: Plant Wansley
Elevation:
Logger:
Dates drilled:

Drilling Co: SCS
Driller: B. Filipovich
Rig type: CME 550
Drilling method: HSA to 7.4', Rock core to 32.5'
Sampling methods:
No. SPT: No. UD: Total depth: 32.5'

Well Name: GS-18



WELL CONSTRUCTION LOG

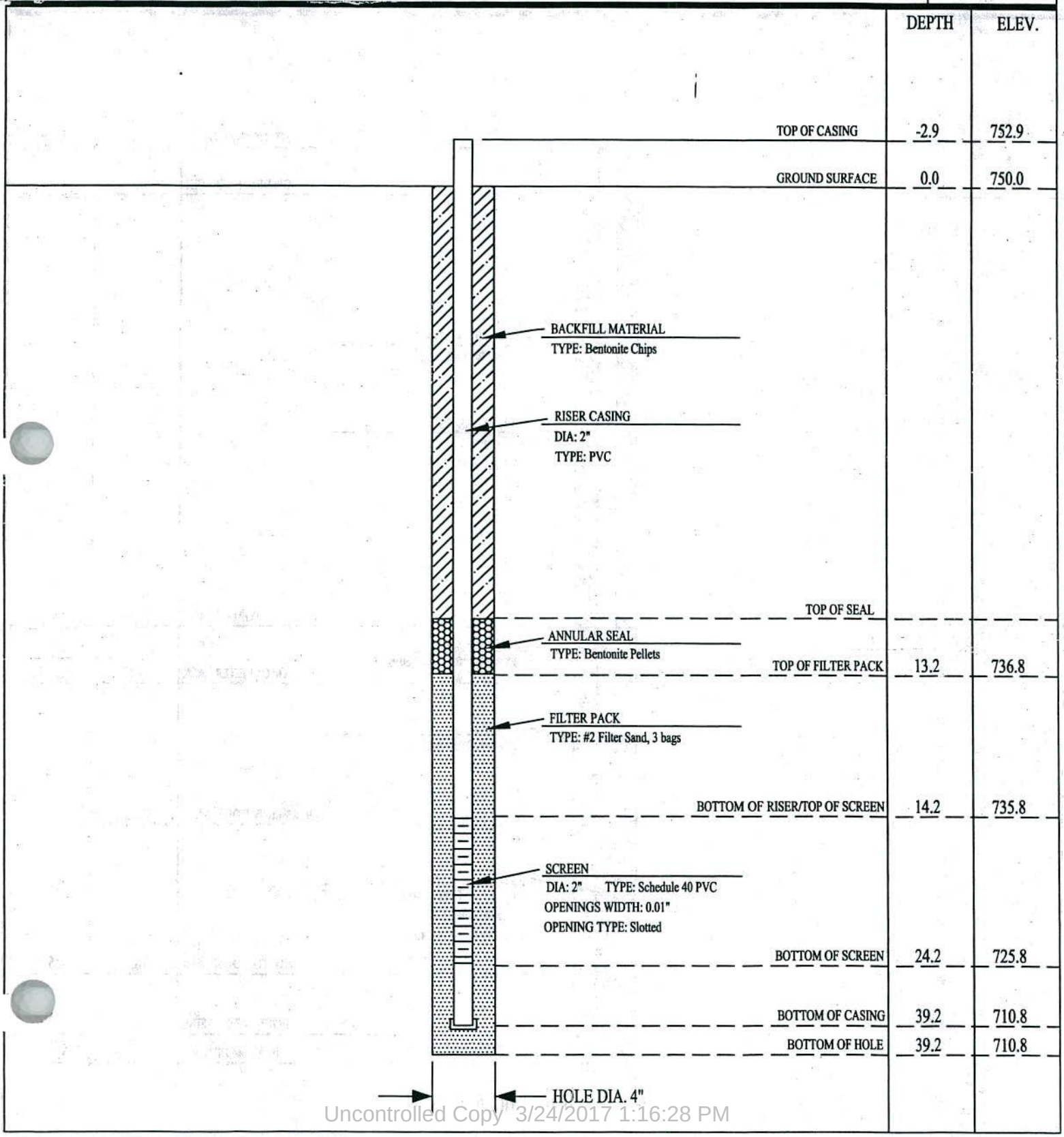
Southern Company Generation

Project: Gypsum Storage Facility
Location: Plant Wansley
Elevation:
Logger: A. Grissom
Dates drilled: 9/27/2006

Drilling Co: SCS
Driller: B. Filipovich
Rig type: CME 550
Drilling method: HSA
Sampling methods:
No. SPT: No. UD: Total depth: 39.2'

Page 1 of 1

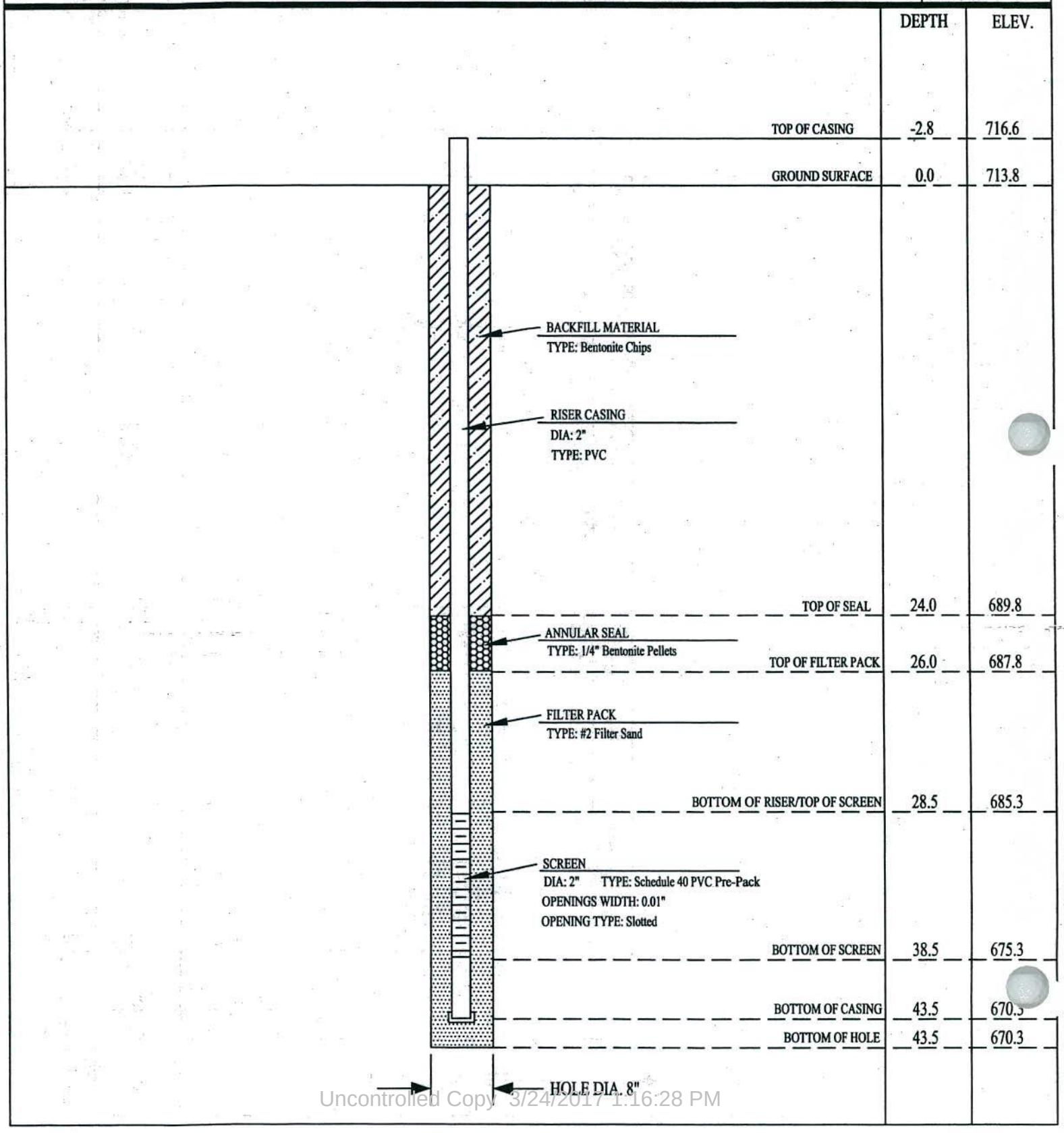
Well Name
GS-19



WELL CONSTRUCTION LOG

Southern Company Generation

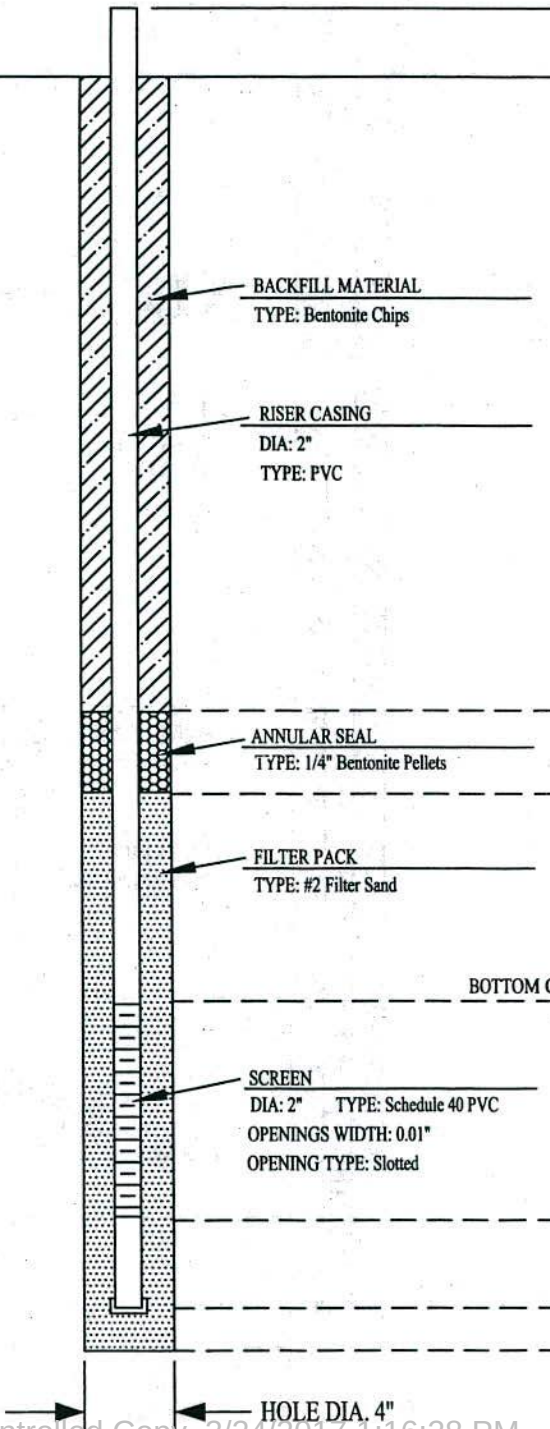
Project: Gypsum Storage Facility Location: Plant Wansley Elevation: Logger: L. Millet Dates drilled: 10/4/06	Drilling Co: SCS Driller: Rig type: CME 550 Drilling method: HSA/HQ Sampling methods: SPT & Core No. SPT: No. UD: Total depth: 43.5'	Page 1 of 1	Well Na GS-20



WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility Location: Plant Wansley Elevation: Logger: L. Millet Dates drilled: 10/3/06	Drilling Co: SCS Driller: Rig type: CME 550 Drilling method: HSA/HQ Sampling methods: SPT & Core No. SPT: No. UD: Total depth: 72.5'	Page 1 of 1	Well Name GS-21

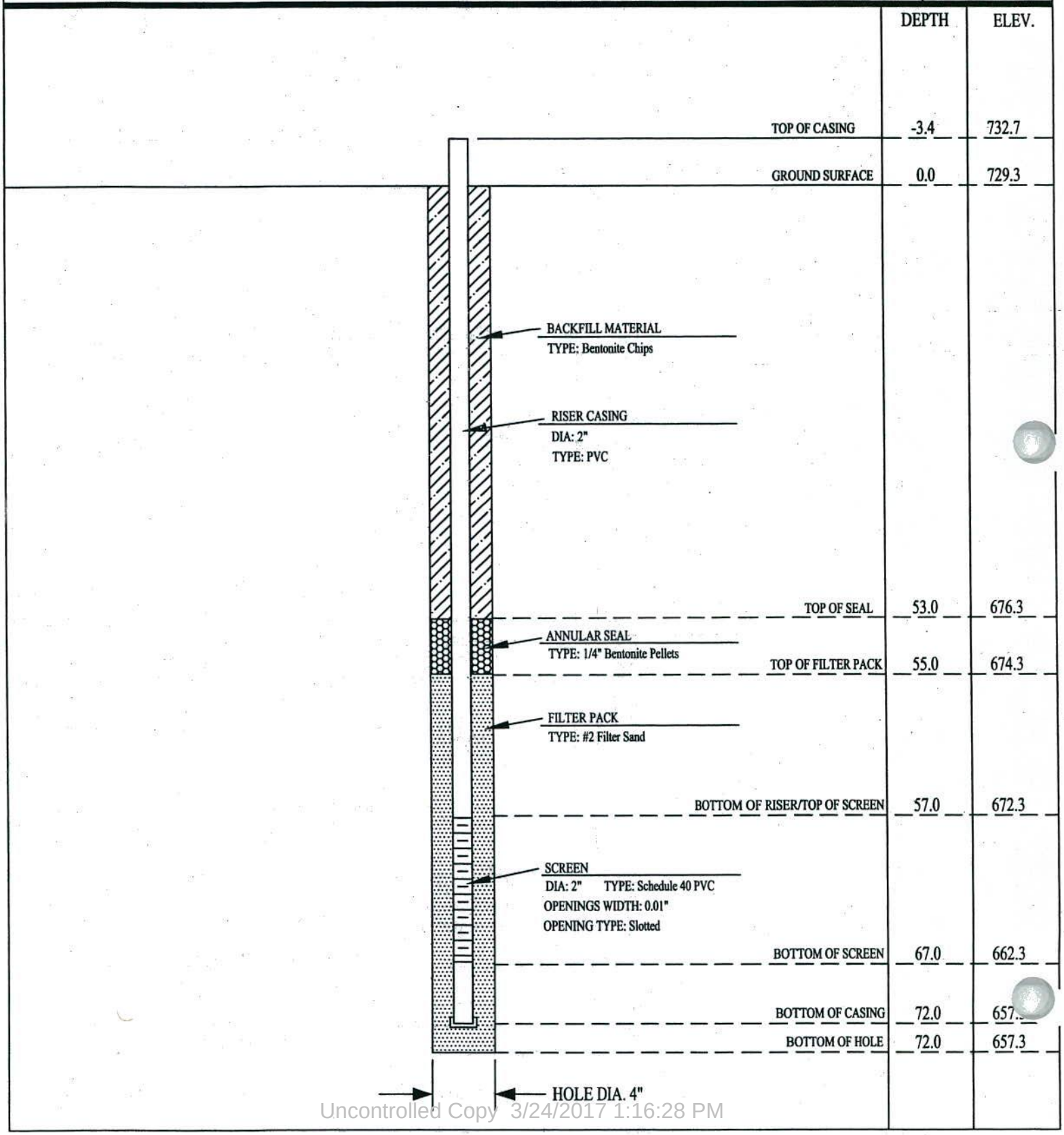


	DEPTH	ELEV.
TOP OF CASING	-2.7	792.1
GROUND SURFACE	0.0	789.4
TOP OF SEAL	53.0	736.4
TOP OF FILTER PACK	55.0	734.4
BOTTOM OF RISER/TOP OF SCREEN	57.5	731.9
BOTTOM OF SCREEN	67.5	721.9
BOTTOM OF CASING	67.5	721.9
BOTTOM OF HOLE	72.5	716.9

WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility Location: Plant Wansley Elevation: Logger: L. Millet Dates drilled: 10/4/06	Drilling Co: SCS Driller: Rig type: CME 550 Drilling method: HSA/HQ Sampling methods: SPT & Core No. SPT: No. UD: Total depth: 72.0'	Page 1 of 1	Well Name GS-22



WELL CONSTRUCTION LOG

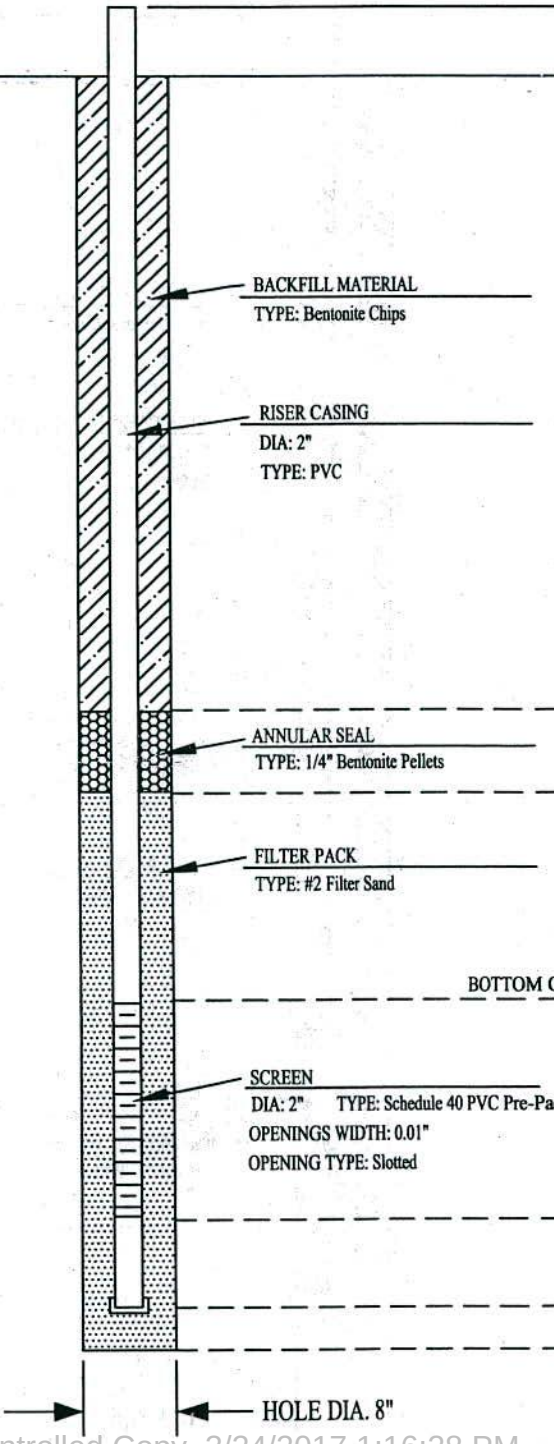
Southern Company Generation

Project: Gypsum Storage Facility
Location: Plant Wansley
Elevation:
Logger: L. Millet
Dates drilled: 10/5/06

Drilling Co: SCS
Driller:
Rig type: CME 550
Drilling method: HSA/HQ
Sampling methods: SPT & Core
No. SPT: No. UD: Total depth: 50.0'

Page 1 of 1

Well Name
GS-23

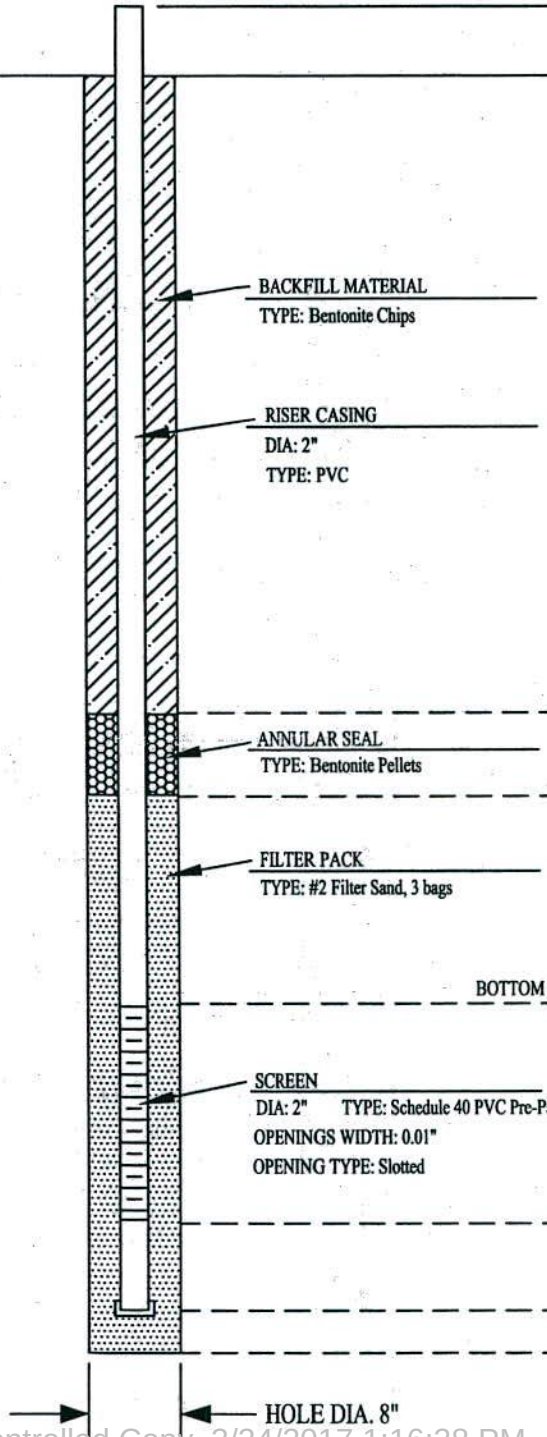


	DEPTH	ELEV.
TOP OF CASING	-2.8	700.7
GROUND SURFACE	0.0	697.9
TOP OF SEAL	26.0	671.9
TOP OF FILTER PACK	28.0	669.9
BOTTOM OF RISER/TOP OF SCREEN	30.0	667.9
BOTTOM OF SCREEN	40.0	657.9
BOTTOM OF CASING	40.0	657.9
BOTTOM OF HOLE	50.0	647.9

WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility Location: Plant Wansley Elevation: Logger: R. Mudd Dates drilled: 10/5/2006	Drilling Co: SCS Driller: B. Filipovich Rig type: CME 550 Drilling method: HSA Sampling methods: No. SPT: No. UD: Total depth: 65.5'	Page 1 of 1	Well Name GS-24



	DEPTH	ELEV.
TOP OF CASING	-3.2	728.2
GROUND SURFACE	0.0	725.0
TOP OF SEAL	51.0	674.0
TOP OF FILTER PACK	53.5	671.5
BOTTOM OF RISER/TOP OF SCREEN	55.5	669.5
BOTTOM OF SCREEN	65.5	659.5
BOTTOM OF CASING	65.5	659.5
BOTTOM OF HOLE	65.5	659.5

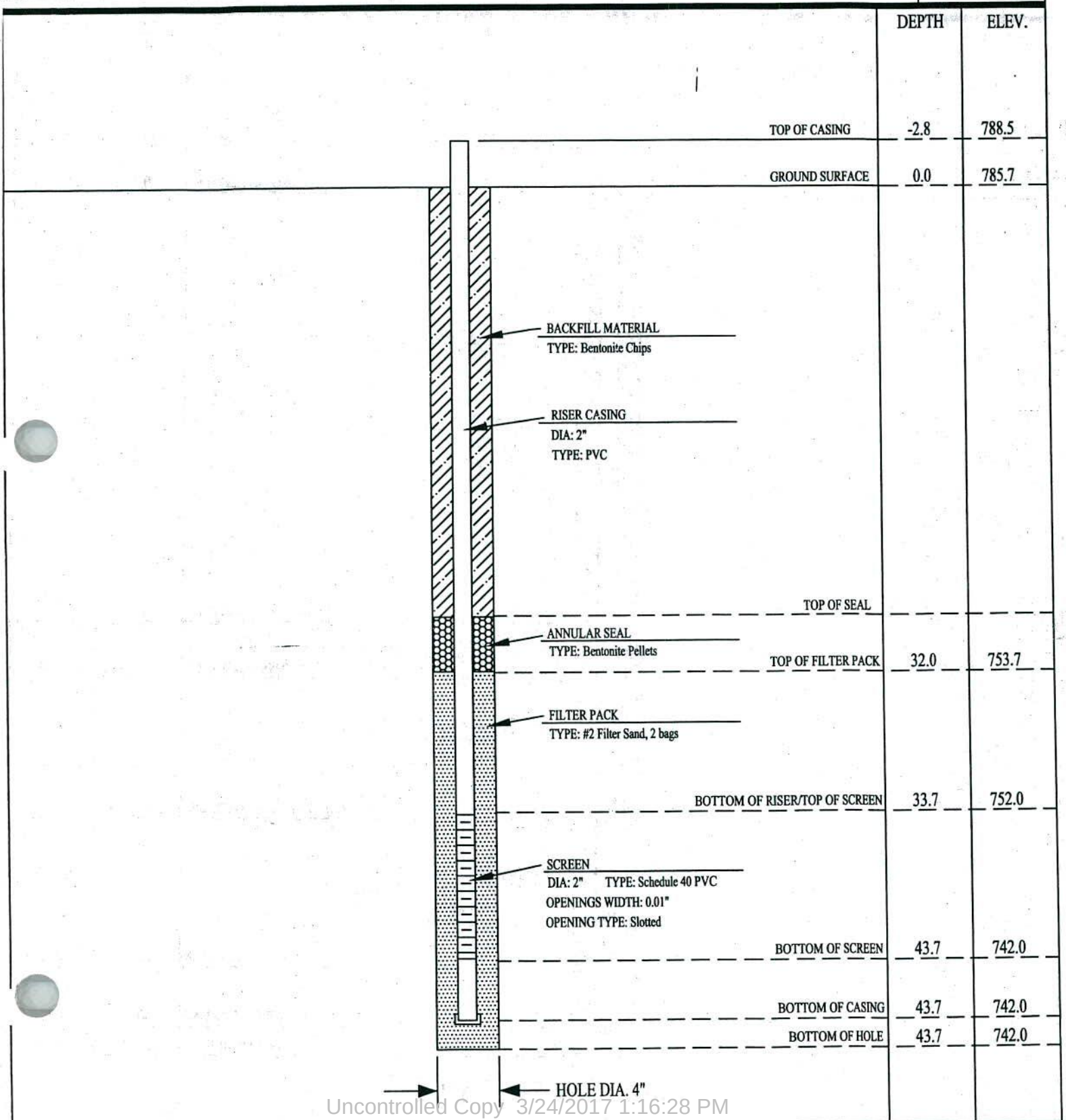
WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility
Location: Plant Wansley
Elevation:
Logger: A. Grissom
Dates drilled: 9/26/2006 to 9/27/2006

Drilling Co: SCS
Driller: B. Filipovich
Rig type: CME 550
Drilling method: HSA
Sampling methods:
No. SPT: No. UD: Total depth: 43.7'

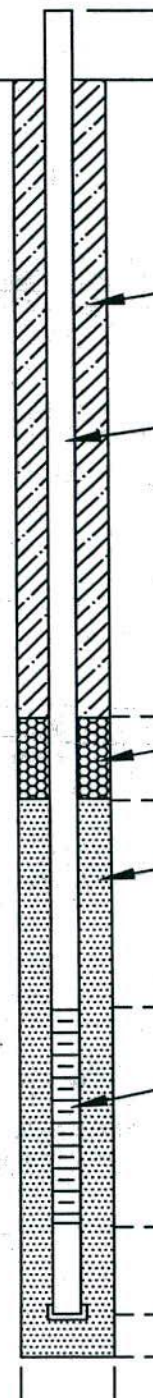
Well Name
GS-25



WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility Location: Plant Wansley Elevation: Logger: L. Millet Dates drilled: 10/2/06	Drilling Co: SCS Driller: Rig type: CME 550 Drilling method: HSA/HQ Sampling methods: SPT & Core No. SPT: No. UD: Total depth: 60.0'	Page 1 of 1	Well Name GS-26



	DEPTH	ELEV.
TOP OF CASING	-3.4	748.1
GROUND SURFACE	0.0	744.7
TOP OF SEAL	41.0	703.7
TOP OF FILTER PACK	43.0	701.7
BOTTOM OF RISER/TOP OF SCREEN	45.0	699.7
BOTTOM OF SCREEN	55.0	689.7
BOTTOM OF CASING	60.0	684.7
BOTTOM OF HOLE	60.0	684.7

WELL CONSTRUCTION LOG

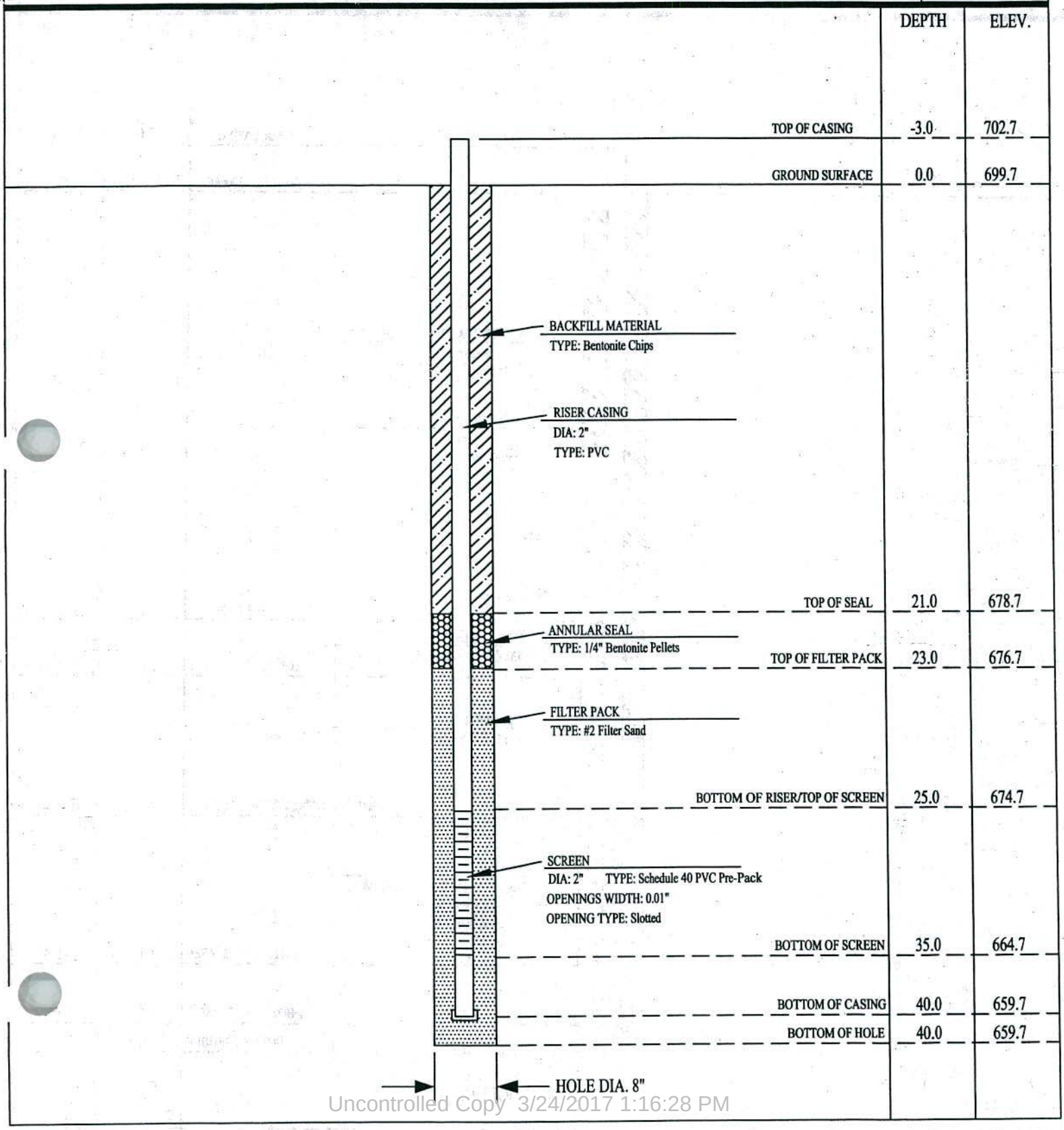
Southern Company Generation

Project: Gypsum Storage Facility
Location: Plant Wansley
Elevation:
Logger: L. Millet
Dates drilled: 10/3/06

Drilling Co: SCS
Driller:
Rig type: CME 550
Drilling method: HSA/HQ
Sampling methods: SPT & Core
No. SPT: No. UD: Total depth: 40.0'

Page 1 of 1

Well Name
GS-27



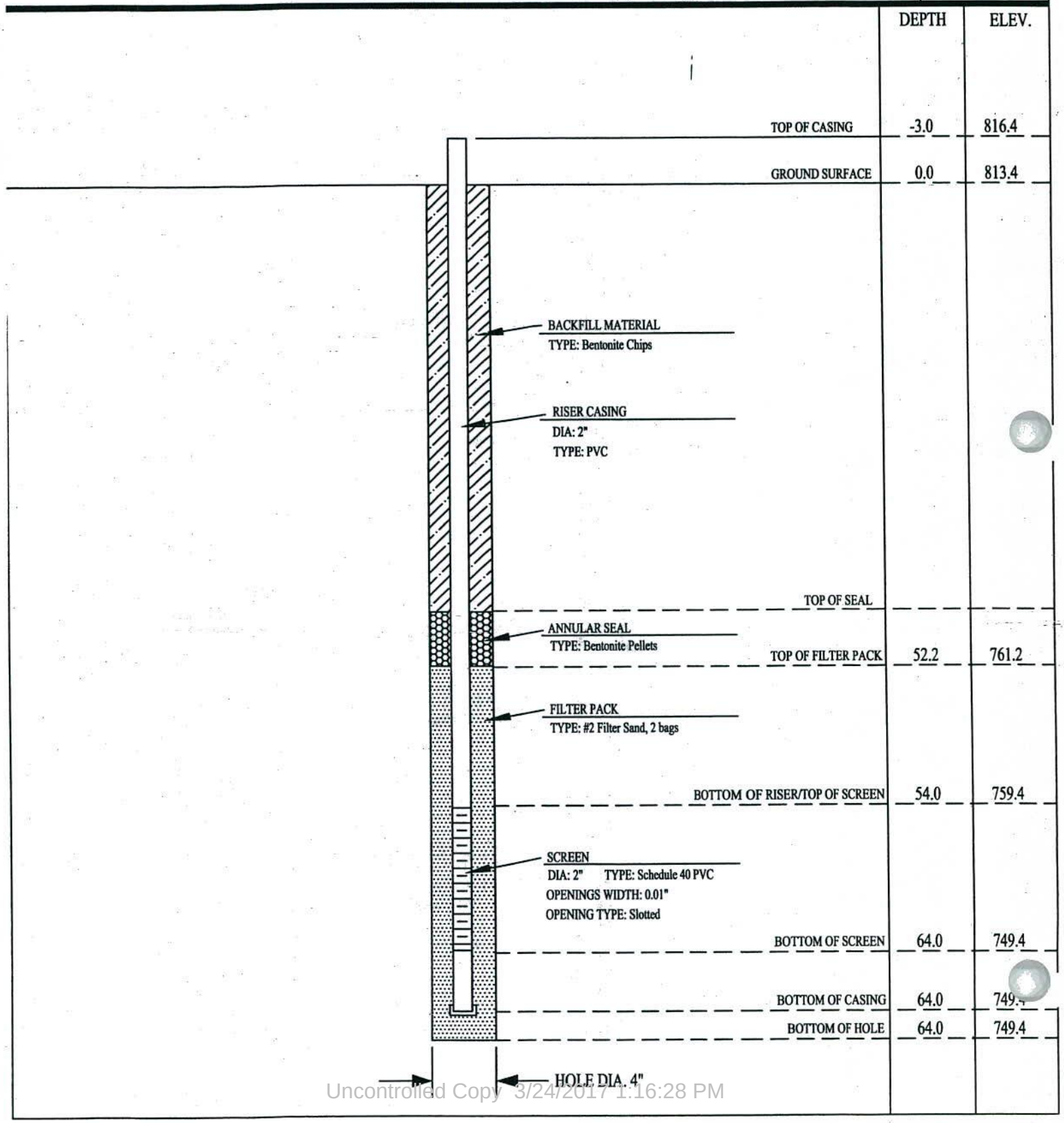
WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility
Location: Plant Wansley
Elevation:
Logger: S. Bearce
Dates drilled: 9/12/2006

Drilling Co: SCS
Driller: B. Filipovich
Rig type: CME 550
Drilling method: HSA
Sampling methods:
No. SPT: No. UD: Total depth: 64.0

Well Name: GS-28



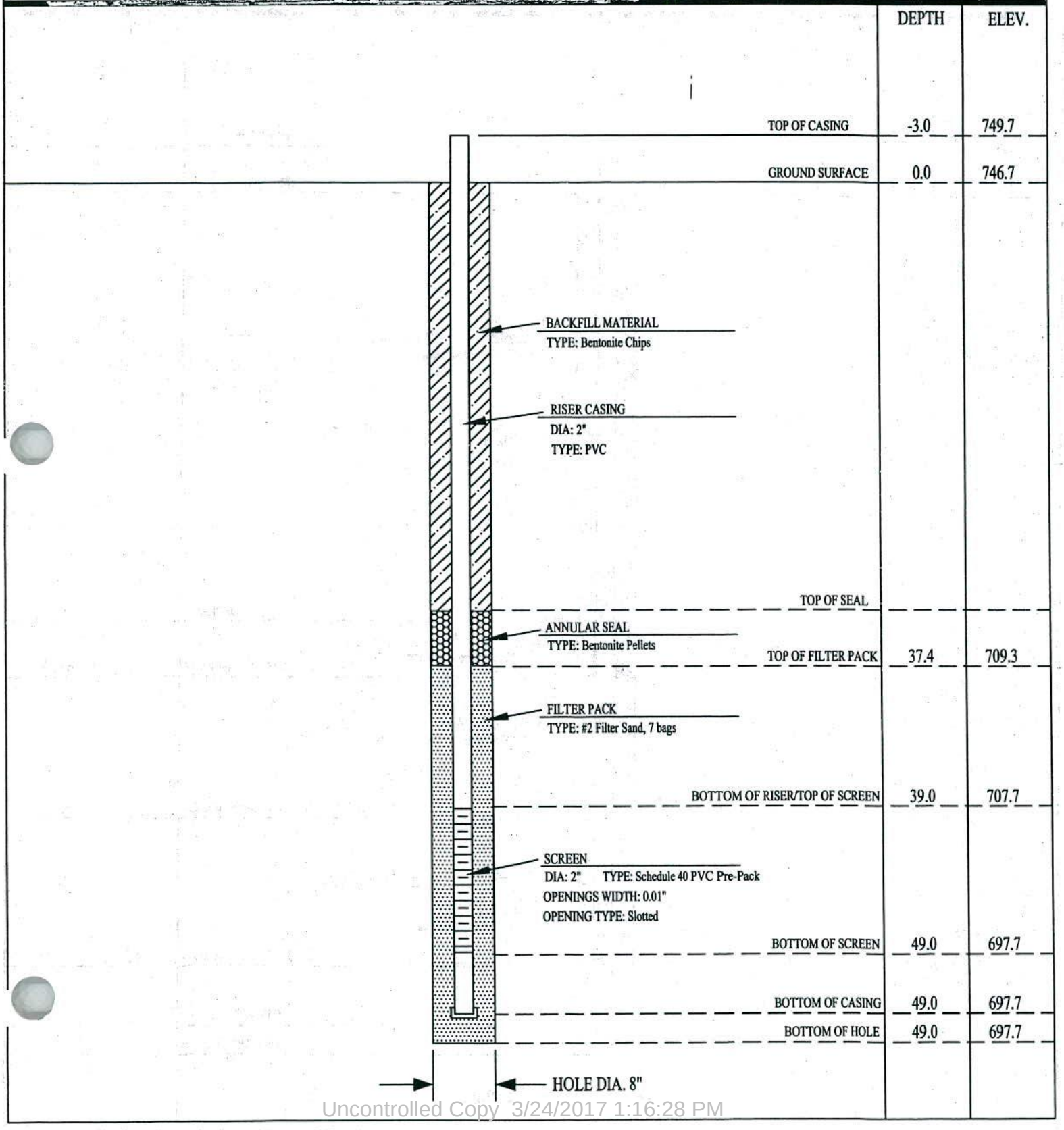
WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility
Location: Plant Wansley
Elevation:
Logger: S. Bearce
Dates drilled: 9/14/2006

Drilling Co: SCS
Driller: B. Filipovich
Rig type: CME 550
Drilling method: HSA
Sampling methods:
No. SPT: No. UD: Total depth: 49.0'

Well Name
GS-29



WELL CONSTRUCTION LOG

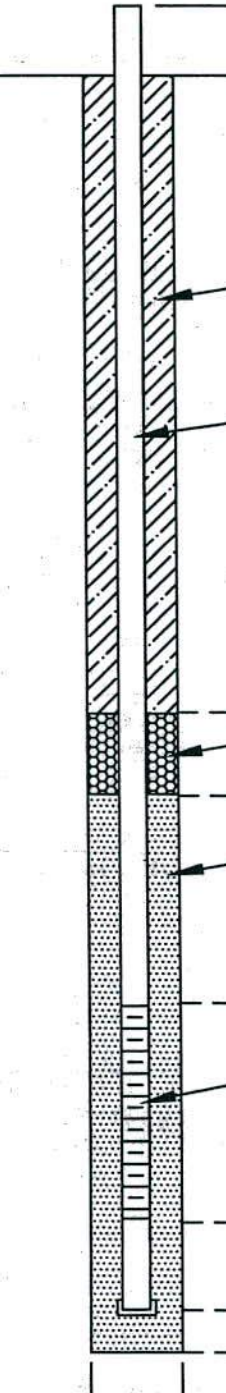
Southern Company Generation

Project: Gypsum Storage Facility
Location: Plant Wansley
Elevation:
Logger: R. Mudd
Dates drilled: 9/19/2006

Drilling Co: SCS
Driller: B. Filipovich
Rig type: CME 550
Drilling method: HSA
Sampling methods:
No. SPT: No. UD: Total depth: 56.5'

Page 1 of 1

Well Name: GS-30



	DEPTH	ELEV.
TOP OF CASING	-2.9	717.5
GROUND SURFACE	0.0	714.6
TOP OF FILTER PACK	33.5	681.1
BOTTOM OF RISER/TOP OF SCREEN	34.5	680.1
BOTTOM OF SCREEN	44.5	670.1
BOTTOM OF CASING	44.5	670.1
BOTTOM OF HOLE	56.5	658.1

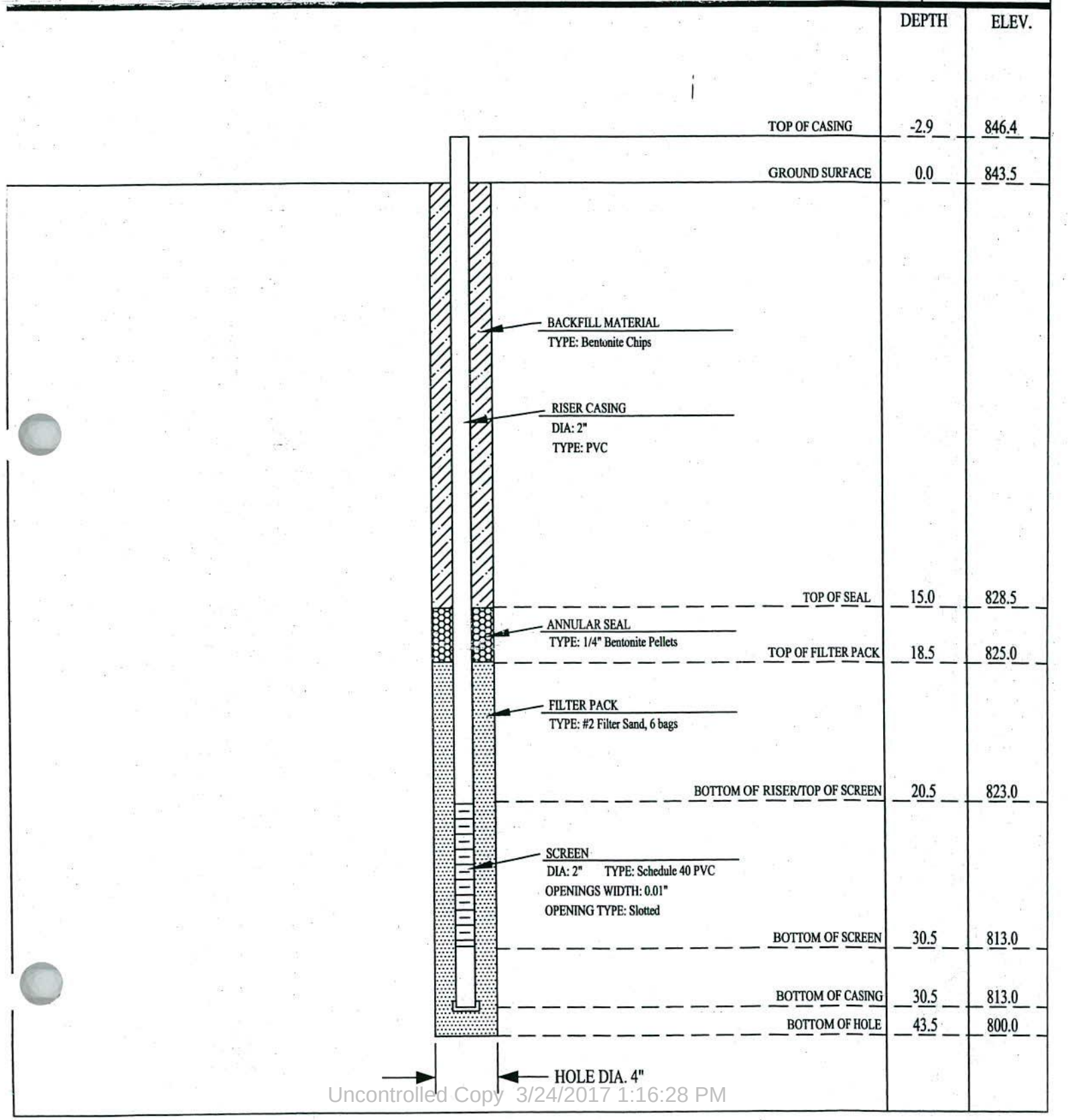
WELL CONSTRUCTION LOG

Southern Company Generation

Project: Gypsum Storage Facility
Location: Plant Wansley
Elevation:
Logger: T. Hartsfield
Dates drilled: 10/21/06

Drilling Co: SCS
Driller: S. Milam
Rig type: CME 550
Drilling method: HSA/HQ Core
Sampling methods: SPT
No. SPT: 6 No. UD: Total depth: 43.5'

Well Name
GS-31



SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 3/3/2011 COMPLETED 3/3/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR Boart Longyear EQUIPMENT METHOD Rotosonic
DRILLED BY LOGGED BY C. Sellers CHECKED BY ANGLE BEARING
BORING DEPTH 46.7 ft. GROUND WATER DEPTH: DURING COMP. DELAYED
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION (Weak / Moderate / Strong)	COMMENTS
		Clayey Sand (SC) - red (10R 4/8) damp, trace gravel		
5		**(PWR)** - very pale brown / very pale orange (10YR 8/2) saprolite micaceous		
10		- PWR: pale red purple (5RP 6/2) saprolite damp - PWR: reddish brown / moderate brown (5YR 4/4) saprolite micaceous		
15		- PWR: brown (10YR 5/3) saprolite wet, micaceous		
20				
25		- PWR: very dark grayish brown (10YR 3/2) saprolite wet, micaceous		
30				
35				
40		- PWR: very pale brown / very pale orange (10YR 8/2) saprolite wet, micaceous		
45				
50		Bottom of borehole at 46.7 feet.		

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 3/3/2011 COMPLETED 3/3/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR Boart Longyear EQUIPMENT METHOD Rotosonic
DRILLED BY LOGGED BY C. Sellers CHECKED BY ANGLE BEARING
BORING DEPTH 57 ft. GROUND WATER DEPTH: DURING COMP. DELAYED
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION (Weak / Moderate / Strong)	COMMENTS
		Silty Sand (SM) - light red / moderate reddish orange (10R 6/6) trace gravel		
		(PWR) - reddish brown / moderate brown (5YR 4/4) saprolite micaceous		
10		- PWR: red (10R 4/8) saprolite wet		
		- PWR: brown (10YR 5/3) saprolite damp, micaceous		
20				
		- black (10YR 2/1) wet, (drilled without water)		
30				
40		- black (10YR 2/1) wet, (drilled without water)		
		- Red Staining (drilled with water)		
50				
		- No red staining		
60		Bottom of borehole at 57.0 feet.		

SIMPLE GEOLOGY LOG - ESEE DATABASE.GDT - 11/9/11 15:55 - T:\ESEE MAJOR PROJECTS\PROJECTS\WANSLEY\WANSLEY 2011\PLANT WANSLEY WELL LOGS.GPJ

BORING GWA-3
PAGE 1 OF 1

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 3/3/2011 COMPLETED 3/3/2011 SURF. ELEV. Not Surveyed COORDINATES: _____
CONTRACTOR Boart Longyear EQUIPMENT _____ METHOD _____
DRILLED BY _____ LOGGED BY C. Sellers CHECKED BY _____ ANGLE _____ BEARING _____
BORING DEPTH 27 ft. GROUND WATER DEPTH: DURING _____ COMP. _____ DELAYED _____
NOTES _____

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	SAMPLE DEPTH (ft.)	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	COMMENTS
		Lean Clay (CL) - red, wet, w/ trace organics					
5		**Sandy Lean Clay (SP-SC)** - yellow to orange					
10		**Partially Weathered Rock** - red, clayey saprolite					
15		- red, clayey saprolite; wet - gray to brown, saprolite; wet					
20		**Quartzite** - tan, vein, dry **Schist** - brown, grey, red, wet					
25							
30		Bottom of borehole at 27.0 feet.					

GEOTECH ENGINEERING LOGS - ESEE DATABASE.GDT - 11/9/11 15:48 - T:\ESEE MAJOR PROJECTS\PROJECTS\WANSLEY\WANSLEY 2011\PLANT WANSLEY WELL LOGS.GPJ

BORING GWA-4
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SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 2/11/2011 COMPLETED 2/11/2011 SURF. ELEV. Not Surveyed COORDINATES: _____
CONTRACTOR Boart Longyear EQUIPMENT _____ METHOD _____
DRILLED BY _____ LOGGED BY G. Dyer CHECKED BY _____ ANGLE _____ BEARING _____
BORING DEPTH 34 ft. GROUND WATER DEPTH: DURING 33 ft. COMP. _____ DELAYED _____
NOTES _____

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	SAMPLE DEPTH (ft.)	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	COMMENTS
		Silty Sand (SM) - damp, sediments are very micaceous					
5		**Sandy Lean Clay (SP-SC)** - orange, moist, low plasticity					
10		**Clayey Sand (SC)** - orange to tan, damp, w/ small pieces of highly weathered schist (white) - tan, damp, w/ more prevalent pieces of weathered schist - orange, damp, micaceous, no pieces of schist					
15		**Silty Clay (CL-ML)** - orange, brown, and gray, damp to wet, medium plasticity, w/ depth, pieces of competent quartz included in core sample					
20		**Partially Weathered Rock** - orange, tan, saprolite; saprolite is derived from schist and has weathered to silt and sand, micaceous, moisture content changes with depth (damp to dry) - tan, saprolite; fewer sands and saprolite is more competent, dry - mottled tan, light brown, grey, highly weathered, saprolite					
25		**Silty Clay (CL-ML)** - light brown, damp, low plasticity					
30		**Clayey Sand (SC)** - tan, very moist, prevalent gravel size pieces of weathered schist/gneiss					
		Gneiss - mottled tan, orange, highly weathered, geniss is weathering to a lightly clayey sand sediment, some pieces of gneiss are very competent					
35		Bottom of borehole at 34.0 feet.					

GEOTECH ENGINEERING LOGS - ESEE DATABASE.GDT - 11/9/11 15:48 - T:\ESEE MAJOR PROJECTS\PROJECTS\WANSLEY\WANSLEY 2011\PLANT WANSLEY WELL LOGS.GPJ

BORING GWC-5
PAGE 1 OF 1

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 2/10/2011 COMPLETED 2/10/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR EQUIPMENT METHOD Rotosonic
DRILLED BY LOGGED BY G. Dyer CHECKED BY ANGLE BEARING
BORING DEPTH 38 ft. GROUND WATER DEPTH: DURING COMP. DELAYED
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	SAMPLE DEPTH (ft.)	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	COMMENTS
5		**(SM)** - orange to tan, dry, w/ angular pieces of partially weathered schist, trace organics					
10		- Schist: dark grey, weathered schist/gneiss, high percentage of grey silt and sand, dry					
15		**Partially Weathered Rock** - tan, grey, brown, saprolite; grain size is predominantly gravel w/ smaller amounts of sand and silt, dry					
20		**Silty Clay (CL-ML)** - orange, wet, w/ gravel size angular gneissic rock **Partially Weathered Rock** - tan to brown, saprolite; mostly gravel to boulder szied weathered schist w/ some geniss, damp **Clayey Gravel (GC)** - brown, grey, wet, gravel is composed of consolidated gneissic fragments					
25							missing section.
30		**Gneiss** - dark grey, partially weathered with clay to sand, dry **Partially Weathered Rock** - orange to tan, saprolite; highly weathered geniss, damp **Gneiss** - grey, consolidated, foliations and structure intact					
35							covered with water.
40		Bottom of borehole at 38.0 feet.					

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 2/10/2011 COMPLETED 2/10/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR Boart Longyear EQUIPMENT METHOD
DRILLED BY LOGGED BY G. Dyer CHECKED BY ANGLE BEARING
BORING DEPTH 28 ft. GROUND WATER DEPTH: DURING 21 ft. COMP. DELAYED 17.7 ft. after 2 hrs.
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	SAMPLE DEPTH (ft.)	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	COMMENTS
		Sandy Lean Clay (SP-SC) - orange, wet, medium plasticity, slighty sandy					
5		**Partially Weathered Rock** - orange to tan, saprolite; mostly gravel, but some is weathered to silt and sand, sediments consist of highly micaceous schist, coarsening downward, poorly sorted, moist					
10		**(SM)** - orange, dry, pieces of more consistent schist - tan, w/ some clay and large angular pieces of geniss present					
15		**Poorly-graded Sandy Gravel (GP)** - mottled tan to brown, dry, sandy gravel; w/ some muds, gravel is angular and derived from gneiss - light tan, dry, sandy gravel; gravel is smaller and more elongate (gneissic parent) - dark grey, dry, sandy gravel (saprolitic); w/ some silts and sands (gneissic parent rock)					
20		**Partially Weathered Rock** - white to orange, saprolite; sandy gravel with higher percentage of silt, damp - tan to brown, highly weathered, saprolite; moist - orange to tan, saprolite; high gravel content with sandy clay matrix, gravel is very large and angular, wet					
25		**Gneiss** - grey, partially weathered gneiss with fine mud matrix, grading down to more unweathered grey gneiss, damp - grey, consolidated, foliations and structures intact, large angular quartz fragments					23' to 28' water was used for drilling.
30		Bottom of borehole at 28.0 feet.					

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED _____ COMPLETED _____ SURF. ELEV. Not Surveyed COORDINATES: _____
CONTRACTOR _____ EQUIPMENT _____ METHOD _____
DRILLED BY _____ LOGGED BY _____ CHECKED BY _____ ANGLE _____ BEARING _____
BORING DEPTH 23 ft. GROUND WATER DEPTH: DURING 12 ft. COMP. _____ DELAYED 12.2 ft. after 24 hrs.
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	SAMPLE DEPTH (ft.)	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	COMMENTS
5		**Partially Weathered Rock** - brown to tan, orange, saprolite/regolith, fine silt to sand matrix w/ partially schist clasts. Clasts are angular and partially oxidized, grey zonations are present at 3' and 6', dry. Orange saprolite weatheres to sands, gravel, and silt - finer than 0-7'.					
10		**Gneiss** - light grey, partially weathered gneiss and schist, mainly sand and silt sized matrix					
15							no sample.
20		- grey, consolidated, foliations and structure intact					
25		Bottom of borehole at 23.0 feet.					

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 2/22/2011 COMPLETED 2/22/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR Boart Longyear EQUIPMENT METHOD Rotosonic
DRILLED BY LOGGED BY G. Dyer CHECKED BY ANGLE BEARING
BORING DEPTH 17 ft. GROUND WATER DEPTH: DURING 7 ft. COMP. DELAYED 7.5 ft. after 18 hrs.
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	SAMPLE DEPTH (ft.)	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	COMMENTS
		Gneiss - brown to dark grey, slightly weathered granitic gneiss; sandy gravel, fragments are competent grades to mottled gray and tan sand w/ small gravels; slightly damp					
5		**Silty Sand (SM)** - mottled brown, grey, tan, wet, w/ fewer gravel sized seps, possible small clayey silt layer					
		Gneiss - tan to brown, slightly weathered gneiss; very competent, sandy gravel, very moist - grey, white, very hard, sample is extremely competent, displays ideal gneissic bonding w/ pink (feldspar) and white bands (quartz) up to .5" thick, lacks fractures and oxide staining, dry					possible solid rock content, possible confining layer - 20% clay to 40% clay. 8' to 10' minor amounts of oxide staining.
10							
15							
		Bottom of borehole at 17.0 feet.					
20							

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 2/23/2011 COMPLETED 2/23/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR Boart Longyear EQUIPMENT METHOD Rotosonic
DRILLED BY LOGGED BY G. Dyer CHECKED BY ANGLE BEARING
BORING DEPTH 16.5 ft. GROUND WATER DEPTH: DURING COMP. DELAYED 4.2 ft. after 20 hrs.
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	SAMPLE DEPTH (ft.)	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	COMMENTS
		Silt (SM) - tan, brown, wet, low to medium plasticity, fine sand; few gravel sized pieces of quartz, clay fraction = 10%					
5		**Poorly-graded Sandy Gravel (SP)** - mottled tan, brown, dark grey, moist, low plasticity, medium to coarse grain, w/ gravel, gravel is comprised of quartz/gneissic fragments, some clay (approximately 9%)					
10		**Gneiss** - grey, white, hard, very competent, MOP iron oxide staining, some gold staining, quartz and feldspar bands 2" thick					
15		- grey, white, hard, very competent, small amounts of iron staining w/ some gold staining, no fractures					
		Poorly-graded Gravel (GP) - zone of angular gravel, oxide staining					
		Gneiss - grey, white, hard, some oxide staining, competent Bottom of borehole at 16.5 feet.					gravel resembles that of stream bed.
20							

BORING GWC-10
PAGE 1 OF 1

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 7/12/2011 **COMPLETED** 7/12/2011 **SURF. ELEV.** Not Surveyed **COORDINATES:**
CONTRACTOR SCS Field Services **EQUIPMENT** 550X **METHOD** HQ Casing; HQ Rock Core
DRILLED BY **LOGGED BY** B. Gallagher **CHECKED BY** **ANGLE** **BEARING**
BORING DEPTH 20.5 ft. **GROUND WATER DEPTH: DURING** **COMP.** **DELAYED** 8.5 ft. after 18 hrs.
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	SAMPLE DEPTH (ft.)	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	COMMENTS
0		**(ML)** - dark brown, damp, medium dense, thin layer of silty fill over silty, sand residuum to partially weathered rock					
5							
10							
15		**Gneiss** - white and black, hard, slightly weathered, schistose with quartz phenocrysts - healed joint at 12.2 ft.	RC -1	12.0-15.5	WR-WR-WR (0)	100 (100)	Auger Refusal at 12.0 ft.
20			RC -2	15.5-20.5	WR-WR-WR (0)	100 (100)	
25		Bottom of borehole at 20.5 feet.					
30							
35							
40							

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 2/23/2011 COMPLETED 2/23/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR Boart Longyear EQUIPMENT METHOD Rotosonic
DRILLED BY LOGGED BY G. Dyer CHECKED BY ANGLE BEARING
BORING DEPTH 15 ft. GROUND WATER DEPTH: DURING COMP. DELAYED 3.4 ft. after 16 hrs.
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	SAMPLE DEPTH (ft.)	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	COMMENTS
		Silty Sand (SM) - orange, red, damp, w/ organics					
		Poorly-graded Sandy Gravel (SP) - light grey, wet, coarse grain, w/ gravel (stream bed deposit), gravels are angular and small					2' - 6' high yield zone.
5		**Silty Sand (SM)** - orange, moist, w/ some clay (approximately 5%)					6' - 11' moderate yield zone.
		- orange, tan, damp, increased consolidation, orginal gneissic foliations (relic structures observed in sediment) , less H2O					
10							
15							

(Continued Next Page)

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	SAMPLE DEPTH (ft.)	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	COMMENTS
		Silty Sand (SM)*(con't)*					
		- less consolidation then 8' - 16' section, finer grained, and more clay (approximately 10%)					
		Partially Weathered Rock					sanded up to 18'.
20		- mottled red, brown, tan, highly weathered, saprolite					
		Gneiss					
25							
		Bottom of borehole at 15.0 feet.					
30							

BORING GWC-12
PAGE 1 OF 1

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 2/23/2011 COMPLETED 2/24/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR Boart Longyear EQUIPMENT METHOD Rotosonic
DRILLED BY LOGGED BY G. Dyer CHECKED BY ANGLE BEARING
BORING DEPTH 37.5 ft. GROUND WATER DEPTH: DURING 17 ft. COMP. DELAYED
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	SAMPLE DEPTH (ft.)	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	COMMENTS
		Poorly-graded Sand (SP) - orange, damp, w/ trace organics					
		Poorly-graded Sand with Silt (SP-SM) - mottled dark brown, tan, damp, w/ some medium sized gravels: sand = 70%, silt = 20%, and gravels = 10%. gravels are weathered gneiss, not very competent mod well sorted and poorly graded, potentially trace clays					
5							7' - 8' more dry.
		- zonation of more tan sediment from 12' to 13'					
10							
15		▽					
		- red, wet, w/ few clays (approximately 5%)					
20		- damp					
25		**Poorly-graded Sandy Gravel (SP)** - brown, red, slightly damp, w/ gravel					
		Gneiss - grey, white, slightly weathered gneiss weathering to silt, competent, some iron staining and pyrite staining w/ increasing depth - grey, white, moderate amounts of Fe oxide staining, heavy pyrite staining					
30							
35							
40		Bottom of borehole at 37.5 feet.					

GEOTECH ENGINEERING LOGS - ESEE DATABASE.GDT - 11/9/11 15:48 - T:\ESEE MAJOR PROJECTS\PROJECTS\WANSLEY\WANSLEY 2011\PLANT WANSLEY WELL LOGS.GPJ

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 2/24/2011 COMPLETED 2/24/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR Boart Longyear EQUIPMENT METHOD Rotosonic
DRILLED BY LOGGED BY G. Dyer CHECKED BY ANGLE BEARING
BORING DEPTH 87.5 ft. GROUND WATER DEPTH: DURING COMP. DELAYED
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION (Weak / Moderate / Strong)	COMMENTS
5		**Poorly-graded Sandy Gravel (GP)** - light red / moderate reddish orange (10R 6/6) very moist, Sand is course, Gravel is angular, poorly sorted - GP: brown (10YR 5/3) and black (10YR 2/1) moist, Highly micaceous, gravel is partially weathered SCHIST		
10		- GP: brown (10YR 5/3) and black (10YR 2/1) moist, Highly micaceous, gravel is partially weathered SCHIST		
15		**SCHIST** - brown (10YR 4/3), light brown (7.5YR 6/3) and black (10YR 2/1) moderately weathered, moist		
20		**Mica SCHIST** - brown (10YR 4/3), light brown (7.5YR 6/3) and black (10YR 2/1) moderately to highly weathered, Relic Structures visible, moist		
25		- SAA, more H20 content		
30		**Poorly-graded Sand (SP)** - brown (10YR 4/3), light brown (7.5YR 6/3) and black (10YR 2/1) wet, coarse micaceous sands		
35		**Poorly-graded Sandy Gravel (GP)** - brown (10YR 4/3), light brown (7.5YR 6/3) and black (10YR 2/1) moist, medium to coarse grained sands with SCHIST gravel		
40		- GP: brown (10YR 4/3) and light brown (7.5YR 6/3) wet		
45		**Poorly-graded Sand (SP)** - brown (10YR 4/3) and light brown (7.5YR 6/3) damp, mostly sand, fewer gravel than previous intervals		
50		**Poorly-graded Sandy Gravel (GP)** - gray (10YR 6/1) and white (10R 8/1) GNEISS 60% gravel, 40% sand		

(Continued Next Page)

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley

LOCATION Carrollton, Georgia

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION (Weak / Moderate / Strong)	COMMENTS
		Poorly-graded Sandy Gravel (GP) *(Con't)*		
		GNEISS - gray (10YR 6/1) and white (10YR 8/1) not weathered, hard and competent		
55		- brown (10YR 4/3), light brown (7.5YR 6/3) and black (10YR 2/1) completely weathered, most likely a fractured or fault zone, very micaceous, wet		
60		**GNEISS** - gray (10YR 6/1) slightly weathered, hard, very competent, dry		
65				
70		**Poorly-graded Sandy Gravel (GP)** - brown (10YR 4/3), light brown (7.5YR 6/3) and dark grayish brown / dark yellowish brown (10YR 4/2) damp, highly weathered SCHIST		
75				
80		**GNEISS** - gray (10YR 6/1) and white (10YR 8/1) slightly weathered, competent, hard, prevalent Fe-oxide staining		
85				
90		Bottom of borehole at 87.5 feet.		
95				
100				
105				
110				

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 6/28/2011 COMPLETED 6/28/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR SCS Field Services EQUIPMENT METHOD 3 1/4" Hollow Stem Auger
DRILLED BY LOGGED BY D. Brooks CHECKED BY ANGLE BEARING
BORING DEPTH 20.5 ft. GROUND WATER DEPTH: DURING COMP. DELAYED 5.97 ft. after 12 hrs.
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	SAMPLE DEPTH (ft.)	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	COMMENTS
		Poorly-graded Sand (SP) - brown and gray, moist, loose					
5			SS -1	4.5-6.0	2-3-4 (7)		
10		**Silty Sand (SM)** - gray and brown, wet, very dense	SS -2	9.5-10.7	15-10-50/2" (100+)		
15			SS -3	14.5-14.8	50-WR-WR/-8" (100+)		
20							
		Bottom of borehole at 20.5 feet.					
25							

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 2/28/2011 COMPLETED 2/28/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR Boart Longyear EQUIPMENT METHOD Rotosonic
DRILLED BY LOGGED BY C. Sellers CHECKED BY ANGLE BEARING
BORING DEPTH 48 ft. GROUND WATER DEPTH: DURING COMP. DELAYED
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION (Weak / Moderate / Strong)	COMMENTS
		Silty Sand (SM) - brown (10YR 4/3) and light red / moderate reddish orange (10R 6/6) trace of gravel		
5		**Silty Sand (SM)** - light red / moderate reddish orange (10R 6/6) damp		
		(PWR) - gray (10YR 5/1) saprolite damp, very micaceous		
10				
15				
20		- PWR: gray (10YR 5/1) saprolite wet, micaceous		
25		- PWR: gray (10YR 5/1) saprolite wet, micaceous, *From 20-28 orange bandind every 1.5'		
30				
35		**SCHIST** - gray (10YR 5/1) moderately weathered, damp		
40		- SCHIST: gray (10YR 5/1) damp		
45		**(PWR)** - gray (10YR 5/1) saprolite		
		SCHIST - black (2.5Y 2.5/1)		
50		Bottom of borehole at 48.0 feet.		

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 6/28/2011 COMPLETED 6/28/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR SCS Field Services EQUIPMENT 550X METHOD 3 1/4" Hollow Stem Auger
DRILLED BY LOGGED BY D. Brooks CHECKED BY ANGLE BEARING
BORING DEPTH 24.9 ft. GROUND WATER DEPTH: DURING COMP. DELAYED
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	SAMPLE DEPTH (ft.)	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	COMMENTS
		Clayey Sand (SC) - reddish brown, damp, medium dense, with wood chips					
5			SS -1	4.5-6.0	7-13-10 (23)		
10			SS -2	9.5-11.0	7-7-5 (12)		
15		**Silty Sand (SM)** - gray, wet, very dense, saprolite	SS -3	14.5-15.3	17-50-WR/-2" (100+)		
20			SS -4	19.5-20.3	30-50-WR/-2" (100+)		
25		Bottom of borehole at 24.9 feet.	SS -5	24.5-24.9	50-WR-WR/-7" (100+)		
30							
35							
40							

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SOUTHERN COMPANY

LOG OF TEST BORING

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SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 6/27/2011 **COMPLETED** 6/28/2011 **SURF. ELEV.** Not Surveyed **COORDINATES:**
CONTRACTOR SCS Field Services **EQUIPMENT** 550X **METHOD** 3 1/4" Hollow Stem Auger
DRILLED BY **LOGGED BY** D. Brooks **CHECKED BY** **ANGLE** **BEARING**
BORING DEPTH 50.5 ft. **GROUND WATER DEPTH: DURING** **COMP.** **DELAYED** 18.5 ft. after 4 hrs.
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	SAMPLE DEPTH (ft.)	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	COMMENTS
		Clayey Sand (SC) - brown, damp, loose, fine grain, with pieces of wood					
			SS -1	4.5-6.0	2-5-6 (11)		
10			SS -2	9.5-11.0	2-3-4 (7)		
			SS -3	14.5-16.0	3-1-3 (4)		
20		▼ - yellowish red below 19.5 ft	SS -4	19.5-21.0	2-3-3 (6)		
			SS -5	24.5-26.0	3-3-4 (7)		
30			SS -6	29.5-31.0	2-2-3 (5)		
		(SC) - yellowish red, wet, dense, saprolite					
40							
50							
		Bottom of borehole at 50.5 feet.					
60							

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SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 3/1/2011 COMPLETED 3/1/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR Boart Longyear EQUIPMENT METHOD Rotosonic
DRILLED BY LOGGED BY C. Sellers CHECKED BY ANGLE BEARING
BORING DEPTH 27.5 ft. GROUND WATER DEPTH: DURING COMP. DELAYED
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION (Weak / Moderate / Strong)	COMMENTS
		Lean Clay (CL) - red (10R 4/8) small amount of sand		
5		**Silty Sand (SM)** - light yellowish brown (10YR 6/4) wet, mica at 7.5', black organics throughout		
10				
15				
		Silty Sand (SM) - gray (10YR 5/1) wet, traces of gravel		
20		**(PWR)** - gray (10YR 5/1) saprolite wet		
25				
		SCHIST - black (2.5Y 2.5/1)		
30		Bottom of borehole at 27.5 feet.		
35				
40				

SIMPLE GEOLOGY LOG - ESEE DATABASE.GDT - 11/9/11 15:55 - T:\ESEE MAJOR PROJECTS\PROJECTS\WANSLEY\WANSLEY 2011\PLANT WANSLEY WELL LOGS.GPJ

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SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 7/13/2011 COMPLETED 7/13/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR SCS Field Services EQUIPMENT 550X METHOD 3 1/4" Hollow Stem Auger; HQ Casing; HQ Rock Core
DRILLED BY LOGGED BY B. Gallagher CHECKED BY ANGLE BEARING
BORING DEPTH 34.7 ft. GROUND WATER DEPTH: DURING COMP. DELAYED
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	SAMPLE DEPTH (ft.)	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	COMMENTS
0		**Sandy Lean Clay (CL)** - tan and gray, damp, medium stiff, low plasticity, fine grain, sandy					
5			SS -1	4.5-6.0	2-3-4 (7)		
10		- with mica and faint rock texture	SS -2	9.5-11.0	2-2-3 (5)		
15		**Silt (ML)** - olive an ddark gray, moist, loose, faint rock texture	SS -3	14.5-16.0	2-2-2 (4)		
20		- reddish orange and tan	SS -4	19.5-21.0	3-4-7 (11)		
25			SS -1	24.5-26.0	6-8-10 (18)		
30		**Partially Weathered Rock** - dark gray, moist, silty, trace fine sand	SS -1	29.5-30.2	38-50-WR/-4" (100+)		
35		Bottom of borehole at 34.7 feet.	SS -1	34.5-34.7	50-WR-WR/-10" (100+)		
40							
45							
50							

GEOTECH ENGINEERING LOGS - ESEE DATABASE.GDT - 11/9/11 15:48 - T:\ESEE MAJOR PROJECTS\PROJECTS\WANSLEY\WANSLEY 2011\PLANT WANSLEY WELL LOGS.GPJ

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 3/1/2011 COMPLETED 3/1/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR Boart Longyear EQUIPMENT METHOD Rotosonic
DRILLED BY LOGGED BY C. Sellers CHECKED BY ANGLE BEARING
BORING DEPTH 68 ft. GROUND WATER DEPTH: DURING COMP. DELAYED
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION (Weak / Moderate / Strong)	COMMENTS
		(OL) - black (10YR 2/1) topsoil		
		Lean Clay (CL) - light red / moderate reddish orange (10R 6/6) from Dyke runoff		
5		**Silty Sand (SM)** - gray (10YR 5/1) contains yellow staining, mica throughout, trace gravel		
10		**(PWR)** - light red / moderate reddish orange (10R 6/6) saprolite - black organics - CL: light green (5G 7/4) damp, found within saprolite		
15				
20		- light red / moderate reddish orange (10R 6/6) saprolite		
25		**(PWR)** - light red / moderate reddish orange (10R 6/6) and gray (10YR 5/1) saprolite damp, trace gravel		
		(PWR) - gray (10YR 5/1) saprolite dry		
30		**(PWR)** - light red / moderate reddish orange (10R 6/6) saprolite wet, top 2" are black		
35				
40		- PWR: gray (10YR 5/1) and light red / moderate reddish orange (10R		

(Continued Next Page)

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION (Weak / Moderate / Strong)	COMMENTS
45		6/6) saprolite wet, grey with orange streaks **(PWR)** *(Con't)*		
50		**(PWR)** - saprolite wet, 30% recovery, consolidated		
55				
60		**(PWR)** - gray (10YR 5/1) saprolite wet		
65				
70		**SCHIST** - contains garnets and mica		
75		Bottom of borehole at 68.0 feet.		
80				
85				

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 7/12/2011 COMPLETED 7/12/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR SCS Field Services EQUIPMENT 550X METHOD 3 1/4" Hollow Stem Auger; HQ Casing; HQ Rock Core
DRILLED BY LOGGED BY B. Gallagher CHECKED BY ANGLE BEARING
BORING DEPTH 34.6 ft. GROUND WATER DEPTH: DURING 14.5 ft. COMP. DELAYED 15.1 ft. after 14 hrs.
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	SAMPLE DEPTH (ft.)	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	COMMENTS
0		**Silt (ML)** - brown and gray, damp, loose, low plasticity					
5			SS -1	4.5-6.0	4-4-4 (8)		
10		**Lean Clay (CL)** - gray, moist, medium stiff, low plasticity, with pieces of black schist (possible fill)	SS -2	9.5-11.0	4-6-6 (12)		
15		**Clayey Sand (SC)** - orangish brown, wet, loose, fine grain	SS -3	14.5-16.0	2-2-3 (5)		
20		**Silty Sand (SM)** - varigated black white and orangish tan, wet, loose to medium dense, with schist texture	SS -4	19.5-21.0	3-2-4 (6)		
25			SS -5	24.5-26.0	5-6-7 (13)		
30			SS -6	29.5-31.0	5-7-12 (19)		
35		Bottom of borehole at 34.6 feet.					
40							
45							
50							

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 3/2/2011 COMPLETED 3/2/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR Boart Longyear EQUIPMENT METHOD Rotosonic
DRILLED BY LOGGED BY C. Sellers CHECKED BY ANGLE BEARING
BORING DEPTH 79 ft. GROUND WATER DEPTH: DURING COMP. DELAYED
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION (Weak / Moderate / Strong)	COMMENTS
5		**Sandy Lean Clay (SC)** - red (10R 5/8) damp		
10		- SC: red (10R 5/8) damp, trace gravel		
15				
20		**Silty Sand (SM)** - light yellowish brown (10YR 6/4) wet, micaceous with gravel		
25		- SM: light yellowish brown (10YR 6/4) micaceous with gravel and biotite		
30		- SM: light yellowish brown (10YR 6/4) wet, micaceous with gravel and biotite		
35		**(PWR)** - yellow (10YR 7/6) and gray (10YR 5/1) saprolite damp		
40				

(Continued Next Page)

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION (Weak / Moderate / Strong)	COMMENTS
		(PWR) *(Con't)* - PWR: light yellowish brown (10YR 6/4) saprolite damp, with Forest Green streaking		
45		**(PWR)** - brilliant green (5G 6/6) saprolite damp, contains brittle white banding layers		
50		**(PWR)** - brilliant green (5G 6/6) and light brown (7.5YR 6/4) saprolite damp		
		(PWR) - brown (7.5YR 5/3) saprolite		
55		**(PWR)** - brilliant green (5G 6/6) saprolite		
		(PWR) - light brown (7.5YR 6/4) and brilliant green (5G 6/6) saprolite damp, very brittle		
60				
65		**(PWR)** - light brown (7.5YR 6/4) and light red / moderate reddish orange (10R 6/6) saprolite damp		
		(PWR) - brown (7.5YR 4/4) saprolite damp		
70				
75				
80		Bottom of borehole at 79.0 feet.		
85				

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 3/2/2011 COMPLETED 3/2/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR Boart Longyear EQUIPMENT METHOD Rotosonic
DRILLED BY LOGGED BY C. Sellers CHECKED BY ANGLE BEARING
BORING DEPTH 65 ft. GROUND WATER DEPTH: DURING COMP. DELAYED
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION (Weak / Moderate / Strong)	COMMENTS
		Clayey Sand (SC) - red (10R 5/6)		
		(PWR) - red (10R 5/6) and brown (7.5YR 5/3) saprolite dry, micaceous		
10		- PWR: light brownish gray / pale yellowish brown (10YR 6/2) saprolite dry, micaceous		
20		- PWR: light brownish gray / pale yellowish brown (10YR 6/2) saprolite damp, more consolidated		
30		- PWR: very dark gray (10YR 3/1) saprolite damp		
35		**SCHIST** - very dark gray (10YR 3/1)		
		(PWR) - light brown (7.5YR 6/4) saprolite damp, micaceous		
40		**(PWR)** - brown (7.5YR 4/4) and gray (10YR 5/1) saprolite wet		

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SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION (Weak / Moderate / Strong)	COMMENTS
45		**Silty Sand (SM)** - gray (2.5Y 5/1) **(PWR)** - brown (7.5YR 4/4) and gray (10YR 5/1) saprolite wet		
50		**Silty Sand (SM)** - very dark gray (10YR 3/1) dry - gray (10YR 6/1) and light brown (7.5YR 6/3) saprolite wet, micaceous		
55				
60				
65		**SCHIST** - contains garnets and mica		
		Bottom of borehole at 65.0 feet.		
70				
75				
80				
85				

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SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 2/15/2011 COMPLETED 2/15/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR Boart Longyear EQUIPMENT METHOD Rotosonic
DRILLED BY LOGGED BY C. Sellers/ Gallagher CHECKED BY ANGLE BEARING
BORING DEPTH 48.2 ft. GROUND WATER DEPTH: DURING COMP. DELAYED
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION (Weak / Moderate / Strong)	COMMENTS
		Clayey Sand (SC) - reddish brown (5YR 5/3) damp		
		Poorly-graded Sand (SP) - light brown (7.5YR 6/3)		
5		**Clayey Sand (SC)** - saprolite contains mica		
		Poorly-graded Sandy Gravel (SP) - white (10R 8/1) feldspar rich sands, trace gravels		
10		**Silty Sand (SM)** - pale brown (10YR 6/3) saprolite contains mica, gravel		
		Clayey Sand (SP) - red (10R 5/6) trace clay		
15		**Lean Clay (CL)** - brown (7.5YR 4/3) and red (10R 5/8)		
		Silty Sand (SM) - red (10R 5/8) and yellow (10YR 7/6) micaceous, trace gravel		
20				
		Silty Sand (SM) - yellow (10YR 7/6) and brown (7.5YR 4/3) micaceous, trace schist gravel		
25				
		Silty Sand (SM) - saprolite micaceous, schist gravel, (5' of recovery: start water @ 29' and stoped @ 35')		
30				
35				
		(PWR) - black (5YR 2.5/1) (4' of recovery)		
40				
45				
		Bottom of borehole at 48.2 feet.		
50				

SIMPLE GEOLOGY LOG - ESEE DATABASE.GDT - 11/9/11 15:55 - T:\ESEE MAJOR PROJECTS\PROJECTS\WANSLEY\WANSLEY 2011\PLANT WANSLEY WELL LOGS.GPJ

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 2/15/2011 COMPLETED 2/15/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR Boart Longyear EQUIPMENT METHOD Rotosonic
DRILLED BY LOGGED BY B. Gallagher/ Sellers CHECKED BY ANGLE BEARING
BORING DEPTH 58.3 ft. GROUND WATER DEPTH: DURING COMP. DELAYED
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION (Weak / Moderate / Strong)	COMMENTS
		Silty Sand (SM) - red (2.5YR 4/6) and yellow (2.5Y 8/8) trace gravel		
		Silty Sand (SM) - red (2.5YR 4/6) and brown (7.5YR 5/4)		
10				
		Poorly-graded Sand (SP) - white (10YR 8/1) weathered feldspar		
		Silty Sand (SM) - red (2.5YR 4/6) and brown (7.5YR 5/4) streaks of mica, beginning to be clayey		
20		**Clayey Sand (SC)** - red (2.5YR 4/6) with mica		
		Silty Sand (SM) - red / moderate reddish brown (10R 4/6) and brown (7.5YR 5/4)		
		Clayey Sand (SC) - red (2.5YR 4/6) saprolite micaceous		
		Silty Sand (SM) - dark yellowish brown (10YR 4/6) micaceous, with trace schist		
30		**Clayey Sand (SC)** - red (2.5YR 4/6) contains some gravel		
		Clayey Sand (SC) - brown (7.5YR 5/4) with white gravel throughout		
		Silty Sand (SM) - yellow (2.5Y 8/8) and white (10YR 8/1) saprolite		
		Silty Sand (SM) - brown (7.5YR 4/2) 50% recovery		
40				
		(PWR) - gray (10YR 5/1)		
		GNEISS		
50				
60		Bottom of borehole at 58.3 feet.		

BORING GWC-26
PAGE 1 OF 1

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 2/16/2011 COMPLETED 2/16/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR Boart Longyear EQUIPMENT METHOD Rotosonic
DRILLED BY LOGGED BY B. Gallagher/ C. Sellers CHECKED BY ANGLE BEARING
BORING DEPTH 56.5 ft. GROUND WATER DEPTH: DURING COMP. DELAYED
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION (Weak / Moderate / Strong)	COMMENTS
		(OH)		
		Lean Clay (CL) - red (10R 4/8) very damp, Low Plasticity, trace sand		
		Silty Sand (SM) - red (10R 4/8) with mica		
		(PWR) - light brown (7.5YR 6/4) and white (10YR 8/1) feldspar layers, contains mica		
10		**Silty Sand (SM)** - light brown (7.5YR 6/4) very micaceous, contains PWR		
		Silty Sand (SM) - reddish brown (2.5YR 4/4) micaceous with PWR		
20				
		Silty Sand (SM) - yellowish brown / moderate yellowish brown (10YR 5/4) wet, perched water, some PWR streaks		
30		**Silty Sand (SM)** - dark red (10R 3/6) micaceous - wet		
40				
		(PWR) - white (10YR 8/1) dry, feldspar		
		Poorly-graded Sandy Gravel (SM) - trace gravel - SM: yellowish brown / moderate yellowish brown (10YR 5/4) trace gravel - SM: pale yellow / grayish yellow (5Y 8/4) trace gravel		
50				
		(PWR) - saprolite		
		Bottom of borehole at 56.5 feet.		
60				

SIMPLE GEOLOGY LOG - ESEE DATABASE.GDT - 11/9/11 15:55 - T:\ESEE MAJOR PROJECTS\PROJECTS\WANSLEY\WANSLEY 2011\PLANT WANSLEY WELL LOGS.GPJ

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 2/16/2011 COMPLETED 2/16/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR Boart Longyear EQUIPMENT METHOD Rotosonic
DRILLED BY LOGGED BY C. Sellers CHECKED BY ANGLE BEARING
BORING DEPTH 68 ft. GROUND WATER DEPTH: DURING COMP. DELAYED
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION (Weak / Moderate / Strong)	COMMENTS
		Silty Sand (SM) - red (10R 5/6) dry		
		(PWR) - white (10YR 8/1)		
5		**Silty Sand (SM)** - red (10R 5/6)		
		Clayey Sand (SC) - red (10R 5/6)		
10		**Silty Sand (SM)** - red (10R 5/6) micaceous		
15		**(PWR)** - red (10R 5/6) saprolite 0.5" white layer at 16.5'		
20		**Silty Sand (SM)** - yellowish brown / moderate yellowish brown (10YR 5/4) micaceous with red streaks		
25		**(PWR)** - yellowish brown / moderate yellowish brown (10YR 5/4) saprolite trace gravel		
30		**(PWR)** - red (10R 5/6) saprolite damp		
35		**(PWR)** - yellowish brown / moderate yellowish brown (10YR 5/4) saprolite damp		
40				

(Continued Next Page)

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION (Weak / Moderate / Strong)	COMMENTS
		(PWR) *(Con't)*		
45		**(PWR)** - white (2.5Y 8/1) dry		
		(PWR) - yellowish brown / moderate yellowish brown (10YR 5/4) saprolite damp		
50		**(PWR)** - yellow (10YR 7/6) saprolite damp		
55		**(PWR)** - yellowish brown / moderate yellowish brown (10YR 5/4) saprolite damp		
60		**(PWR)** - yellowish brown / moderate yellowish brown (10YR 5/4) saprolite wet, with gravel		
65		**GNEISS**		
		Bottom of borehole at 68.0 feet.		
70				
75				
80				
85				

BORING GWA-28
PAGE 1 OF 1

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 2/22/2011 COMPLETED 2/22/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR Boart Longyear EQUIPMENT METHOD Rotosonic
DRILLED BY LOGGED BY G. Dyer CHECKED BY ANGLE BEARING
BORING DEPTH 43 ft. GROUND WATER DEPTH: DURING COMP. DELAYED 19.4 ft. after 24 hrs.
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	SAMPLE DEPTH (ft.)	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	COMMENTS
		Silty Sand (SM) - orange, damp, low plasticity, w/ gravel sized pieces of quartz - quartz is angular - sample is weathered from schist, some clay found (approximately 10%), micas weathering to white clay minerals					
5		- orange, slightly damp, orange grading down to white; fewer clay minerals (approximately 5%), sediment is less consolidated than 0' - 4' section. white material is highly weathered schist, relic cleavages and foliations can barely be discerned					no quartz, orange grades to white.
		Schist					perched 8' - 10' H2O.
10		- white, tan, has weathered to medium grained sands w/ less than 10% silt, wet					
		- mottled tan, brown, weathered, coarse sand to gravel sized, poorly sorted and graded, gravel sized pieces are structually intact schist. grades to more tan, sand and gravel sized regolith, preferential bands of more competent schist found (dark), dry					
15							
		- banded tan, orange, white, weathered, coarse sand to gravel sized, white sediments contain larger fragments of schist, dry					tan. orange. white/grey.
		Silty Sand (SM)					
20		- tan, wet, medium grain					
		Poorly-graded Sand (SP) - mottled white, tan, orange, dry, fine to medium grain, w/ angular, gravel sized schist fragments					
25		**Silty Sand (SM)** - mottled tan, white, dry, clay particles present less than 2%, angular gravel to boulder sized fragments of schist					
		Partially Weathered Rock					
30		- brown, orange, saprolite (schist/gneiss contact), zoned					
		Gneiss - banded grey, white, competent, relic structures and foliations intact, sugary pegmatic quartz coating on cuttings, prevalent zones of oxidation suggesting fractures, fractures identified parallel to cleavage planes					last 10' drilled w/ water.
35							
40							
45		Bottom of borehole at 43.0 feet.					

GEOTECH ENGINEERING LOGS - ESEE DATABASE.GDT - 11/9/11 15:48 - T:\ESEE MAJOR PROJECTS\PROJECTS\WANSLEY\WANSLEY 2011\PLANT WANSLEY WELL LOGS.GPJ

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 6/21/2011 COMPLETED 6/26/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR SCS Field Services EQUIPMENT 550X METHOD 3 1/4" Hollow Stem Auger; HQ Casing; HQ Rock Core
DRILLED BY LOGGED BY B. Gallagher/D. Brook CHECKED BY ANGLE BEARING
BORING DEPTH 54.7 ft. GROUND WATER DEPTH: DURING COMP. DELAYED 39.8 ft. after 1 hrs.
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	SAMPLE DEPTH (ft.)	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	COMMENTS
		Sandy Silt (ML) - brown, damp					
		Silty Sand (SM) - tan, damp					
		Poorly-graded Sand (SP) - tand and white, damp					
10		**Gneiss** - gray and pink, medium to fine grain, soft, highly weathered - quartz bands at 10.6 ft - stained joint at 11 ft - medium hard, slightly weathered, slightly stained below 11.5 ft - stained joint at 13.2 ft - stained joint at 13.7 ft - hard, slightly weathered, below 15.2 ft - 9 stained joints from 15.7 to 19.7 ft - hard, not weathered, below 19.7 ft - 3 partially healed, slightly stained joints from 20.9 to 24.6 ft - hard, slightly weathered, below 24.3 ft - soft to hard, highly to slightly weathered, with 11 weathered, stained joints from 24.7 to 26.5 ft - hard, slightly weathered, below 26.5 ft - slightly weathered, stained joints from 29.7 to 34.7 - healed fractures broken by coring from 33.7 to 34.7 ft - high-angle joint with dry gray clay coating from 35.9 to 36.5 - stained, healed, high-angle joint from 37.2 to 37.7 - stained, high-angle joint from 38.7 to 39.7 - heavily stained, high-angle joint at 41.7 ft - heavily stained, high-angle joint at 43.7 ft - heavily stained, high-angle joint at 44.2 ft	RC -1	9.5-14.7	WR-WR-WR (0)	96 (17)	Auger Refusal at 9.5 ft.
20			RC -2	14.7-19.7	WR-WR-WR (0)	100 (52)	
			RC -3	19.7-24.7	WR-WR-WR (0)	100 (96)	
30			RC -4	24.7-29.7	WR-WR-WR (0)	100 (42)	
			RC -5	29.7-34.7	WR-WR-WR (0)	100 (74)	
40			RC -6	34.7-39.7	WR-WR-WR (0)	100 (60)	
			RC -7	39.7-44.7	WR-WR-WR (0)	100 (68)	Lost circulation at 39.5 ft. 50% return begining at 40 ft. Lost circulation at 40.5 ft.
50			RC -8	44.7-49.7	WR-WR-WR (0)	90 (16)	
			RC -9	49.7-54.7	WR-WR-WR (0)		
60		Bottom of borehole at 54.7 feet.					

BORING GWC-30
PAGE 1 OF 1

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 2/17/2011 COMPLETED 2/17/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR Boart Longyear EQUIPMENT METHOD Rotosonic
DRILLED BY LOGGED BY C. Sellers CHECKED BY ANGLE BEARING
BORING DEPTH 47 ft. GROUND WATER DEPTH: DURING COMP. DELAYED
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION (Weak / Moderate / Strong)	COMMENTS
		Clayey Sand (SC) - very pale brown / grayish orange (10YR 7/4) damp, fine to medium grained, with trace gravel		
5		**Clayey Sand (SC)** - light red / moderate reddish orange (10R 6/6) damp, fine to medium grained		
10		**Clayey Sand (SC)** - light red / moderate reddish orange (10R 6/6) damp, micaceous		
		SCHIST - slightly weathered, crushed		
15		**SCHIST** - crushed		
		(PWR) - brown (7.5YR 4/3) saprolite clayey and micaceous		
20		**(PWR)** - light yellowish brown (10YR 6/4) saprolite wet		
25				
30				
		Silty Sand (SM) - very pale brown / grayish orange (10YR 7/4) wet		
35				
		Silty Sand (SM) - very pale brown / grayish orange (10YR 7/4) wet		
40				
45				
50		Bottom of borehole at 47.0 feet.		

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SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 6/20/2011 COMPLETED 6/21/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR SCS Field Services EQUIPMENT 550X METHOD 3 1/4" Hollow Stem Auger; HQ Casing; HQ Rock Core
DRILLED BY LOGGED BY B. Gallagher CHECKED BY ANGLE BEARING
BORING DEPTH 34.2 ft. GROUND WATER DEPTH: DURING COMP. DELAYED
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	SAMPLE DEPTH (ft.)	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	COMMENTS
		Silty Sand (SM) - brown, damp, medium dense, fine grain					
		Sandy Silt (ML) - tan, damp, medium dense					
5		**Gneiss** - pink and white, medium to fine grain, hard, slightly weathered, granitoid; with 7 stained slightly weathered joints from 4.7 to 7.4 ft. - 0.25" quartz vein at 5.9 ft. - 4 coated joints from 7.4 to 9.2 ft.	RC -1	4.7-9.2	WR-WR-WR (0)	96 (49)	Auger refusal at 4.7 ft.
10		- stained, semi-vertical joint from 11.6 to 12.2 ft.	RC -2	9.2-14.2	WR-WR-WR (0)	100 (84)	
15		- pink and gray, no weathering below 14.2 ft - horizontal, slightly weathered joint at 14.8 ft - horizontal, slightly weathered joint at 15.2 ft - sub-horizontal, slightly weathered joint at 17.6 ft - sub-horizontal, slightly weathered joint at 18.4 ft	RC -3	14.2-19.2	WR-WR-WR (0)	100 (86)	
20		- slighty weathered, stained joint at 20 ft - slightly weathered with 0.1 ft quartz lens from 21 to 21.5 ft - healed joint at 22.2 ft.	RC -4	19.2-24.2	WR-WR-WR (0)	100 (90)	Lost Circulation at 21 ft.
25		- slighty weathered, stained joint at 23.9 ft - slighty weathered, stained joint at 25.4 ft - slightly weathered from 26.2 to 26.7 ft - slighty weathered, stained joint at 27.2 ft	RC -5	24.2-29.2	WR-WR-WR (0)	100 (88)	
30		- slightly weathered from 30.3 to 31.9 ft - slightly weathered, medium hard joint at 31.3 ft. - stained, near vertical joint from 32.2 to 32.5 ft.	RC -6	29.2-34.2	WR-WR-WR (0)	100 (76)	
35		Bottom of borehole at 34.2 feet.					
40							

BORING GWC-32
PAGE 1 OF 1

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 2/18/2011 **COMPLETED** 2/18/2011 **SURF. ELEV.** Not Surveyed **COORDINATES:**
CONTRACTOR Boart Longyear **EQUIPMENT** **METHOD** Rotosonic
DRILLED BY **LOGGED BY** C. Sellers **CHECKED BY** **ANGLE** **BEARING**
BORING DEPTH 30 ft. **GROUND WATER DEPTH: DURING** **COMP.** **DELAYED**
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION (Weak / Moderate / Strong)	COMMENTS
		Clayey Sand (SC) - light red / moderate reddish orange (10R 6/6)		
5		**Clayey Sand (SC)** - weak red / pale reddish brown (10R 5/4) with weathered SCHIST gravel		
10		**Clayey Sand (SC)** - yellowish brown / moderate yellowish brown (10YR 5/4) damp		
		Clayey Sand (SC) - brown (7.5YR 4/2) damp		
15		**Silty Sand (SM)** - light gray (10YR 7/1) with large SCHIST gravel		
20		**SCHIST** - and gray (10YR 5/1) slightly weathered, heavy red stain		
25				
30		**GNEISS** - and gray (10YR 5/1)		
35		Bottom of borehole at 30.0 feet.		
40				

BORING GWC-33
PAGE 1 OF 1

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 2/18/2011 COMPLETED 2/18/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR Boart Longyear EQUIPMENT METHOD Rotosonic
DRILLED BY LOGGED BY C. Sellers CHECKED BY ANGLE BEARING
BORING DEPTH 21 ft. GROUND WATER DEPTH: DURING COMP. DELAYED
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION (Weak / Moderate / Strong)	COMMENTS
		Lean Clay (CL) - red (10R 4/8)		
		Clayey Sand (SC) - light red / moderate reddish orange (10R 6/6)		
5		**(PWR)** - brown (7.5YR 5/4) and light red / moderate reddish orange (10R 6/6)		
10		**(PWR)** - white (10YR 8/1) weathered		
		(PWR) - red (10R 4/8) and brown (7.5YR 5/4) very damp, micaceous		
15		**SCHIST**		
		GNEISS		
20				
		Bottom of borehole at 21.0 feet.		
25				
30				
35				
40				

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SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DATE STARTED 2/21/2011 COMPLETED 2/21/2011 SURF. ELEV. Not Surveyed COORDINATES:
CONTRACTOR Boart Longyear EQUIPMENT METHOD Rotosonic
DRILLED BY LOGGED BY G. Dyer CHECKED BY ANGLE BEARING
BORING DEPTH 48 ft. GROUND WATER DEPTH: DURING COMP. DELAYED 0.5 ft. after 18 hrs.
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	SAMPLE DEPTH (ft.)	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	COMMENTS
		▼ - lost sample to 8'					
5							
10		**Silty Sand (SM)** - orange, tan. black, wet, fine grain, w/ cobble to boulder sized pieces of quartz and highly weathered schist - tan, white, very moist, coarse grain, appears to be highly weathered granific gneiss, some clay material					water 8.5' - 15'. stark color contrast.
15		**Clayey Silty Sand (SC-SM)** - orange, tan, damp, less than 10% clay					
20		**Partially Weathered Rock** - brown, tan, saprolite; moderately consolidated, prevalent mica, and some relic structure - grades to less consolidated and more sand (micaceous) - tan, brown, schist parent rock; brown to black mica streaks; relic structures; medium well consolidated, damp low strength, weathering to fine sand - tan, orange, mod, well consolidated, damp, some relic structures preserved					
25		- tan, brown, highly weathered, highly weathered to sand and silt, some relic structures, damp; grades to more orange and tan also more highly weathered					
30		**Silty Sand (SM)** - tan, very damp, fairly well consolidated, well sorted					crator?.
35		**Partially Weathered Rock** - brown, tan, black, saprolite; schist moderately weathered, some competency, weathering to fine sand, very micaceous, slightly damp - mottled brown, black, tan, not competent, moist, weathered to sand and gravel sized schist? mica flakes dry (70% sand, 30% gravel)					
40		**Poorly-graded Sand (SP)** - light grey, white, very dry, gravel sized schist, gravels are elongate and angular (very competent)					
45		**Granite** - grey, consolidated, relic structures intact, lacks oxide staining, quartz veining					
50		- grey, consolidated, relic structures, lacks oxidation, quartz veining					

(Continued Next Page)

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	SAMPLE DEPTH (ft.)	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	COMMENTS
55		**Granite***(con't)*					
		Bottom of borehole at 48.0 feet.					

BORING GWC-35
PAGE 1 OF 1

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Wansley
LOCATION Carrollton, Georgia

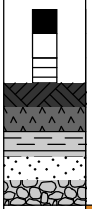
DATE STARTED 2/7/2011 **COMPLETED** 2/7/2011 **SURF. ELEV.** Not Surveyed **COORDINATES:**
CONTRACTOR Boart Longyear **EQUIPMENT** **METHOD** Rotosonic
DRILLED BY **LOGGED BY** G. Dyer/ D. Brooks **CHECKED BY** **ANGLE** **BEARING**
BORING DEPTH 38 ft. **GROUND WATER DEPTH: DURING** **COMP.** **DELAYED**
NOTES Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION (Weak / Moderate / Strong)	COMMENTS
		Clayey Sand (SC) - black (10YR 2/1) moist, very fine to fine grained		
5		**Clayey Sand (SC)** - light red / moderate reddish orange (10R 6/6) wet, medium plasticity, very fine grained sand		
10		**Silty Sand (SM)** - pale brown (10YR 6/3) saprolite some relic structures 10'-12' - SM: brown (7.5YR 4/3) saprolite 12'-15'		
15		- SM: brown (7.5YR 4/3) SAA except micaceous		
20		**Poorly-graded Gravel with Clay (GP-GC)** - dusky red / dark reddish brown (10R 3/4) fine grained sand with quartz gravel		
25		**(PWR)** - brown (7.5YR 4/3) saprolite SAND, silty and micaceous		
		Clayey Sand (SC) - brown (7.5YR 4/3) micaceous with large quartz pebbles		
30		**(PWR)** - dark gray (10YR 4/1) saprolite wet, SAND, silty, clayey with highly weathered GNEISS		
35		**GNEISS**		
40		Bottom of borehole at 38.0 feet.		

SIMPLE GEOLOGY LOG - ESEE DATABASE.GDT - 11/9/11 15:55 - T:\ESEE MAJOR PROJECTS\PROJECTS\WANSLEY\WANSLEY 2011\PLANT WANSLEY WELL LOGS.GPJ

Geosyntec consultants
engineers | scientists | innovators

BORING AND WELL LOG LEGEND

LITHOLOGY	WATER LEVEL	WELL/BORING COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (ft)	SOIL/ROCK VISUAL DESCRIPTION	MEASURE: PID (ppm)	MEASURE: Lab Sample
			GR EN SS ST CO DP				ASPHALT CONCRETE FILL TOPSOIL COBBLES IGNEOUS Rock METAMORPHIC Rock SEDIMENTARY Rock Well-graded GRAVEL (GW) Poorly graded GRAVEL (GP) Silty GRAVEL (GM) Clayey GRAVEL (GC) Well-graded GRAVEL with silt (GW-GM) Poorly graded GRAVEL with silt (GP-GM) Well-graded GRAVEL with clay (GW-GC) Poorly graded GRAVEL with clay (GP-GC) Well-graded SAND (SW) Poorly graded SAND (SP) Silty SAND (SM) Clayey SAND (SC) Well-graded SAND with silt (SW-SM) Poorly graded SAND with silt (SP-SM) Well-graded SAND with clay (SW-SC) Poorly graded SAND with clay (SP-SC) SILT (ML) Lean CLAY (CL) Organic SOIL (OL) Elastic SILT (MH) Fat CLAY (CH) Organic SOIL (OH) PEAT (PT) Volume Descriptors: Trace = <5% Few = 5-10% Little = 15-25% Some = 30-45% Mostly = >=50% Water Level During Drilling Water Level at End of Drilling/in Completed Well Cap Riser Screen Cement Bentonite Grout Bentonite Seal Filter Pack Backfill Grab Encore Split Spoon Shelby Tube Core Barrel Direct Push Lab Sample and ID	0.0	ID

NOTES:

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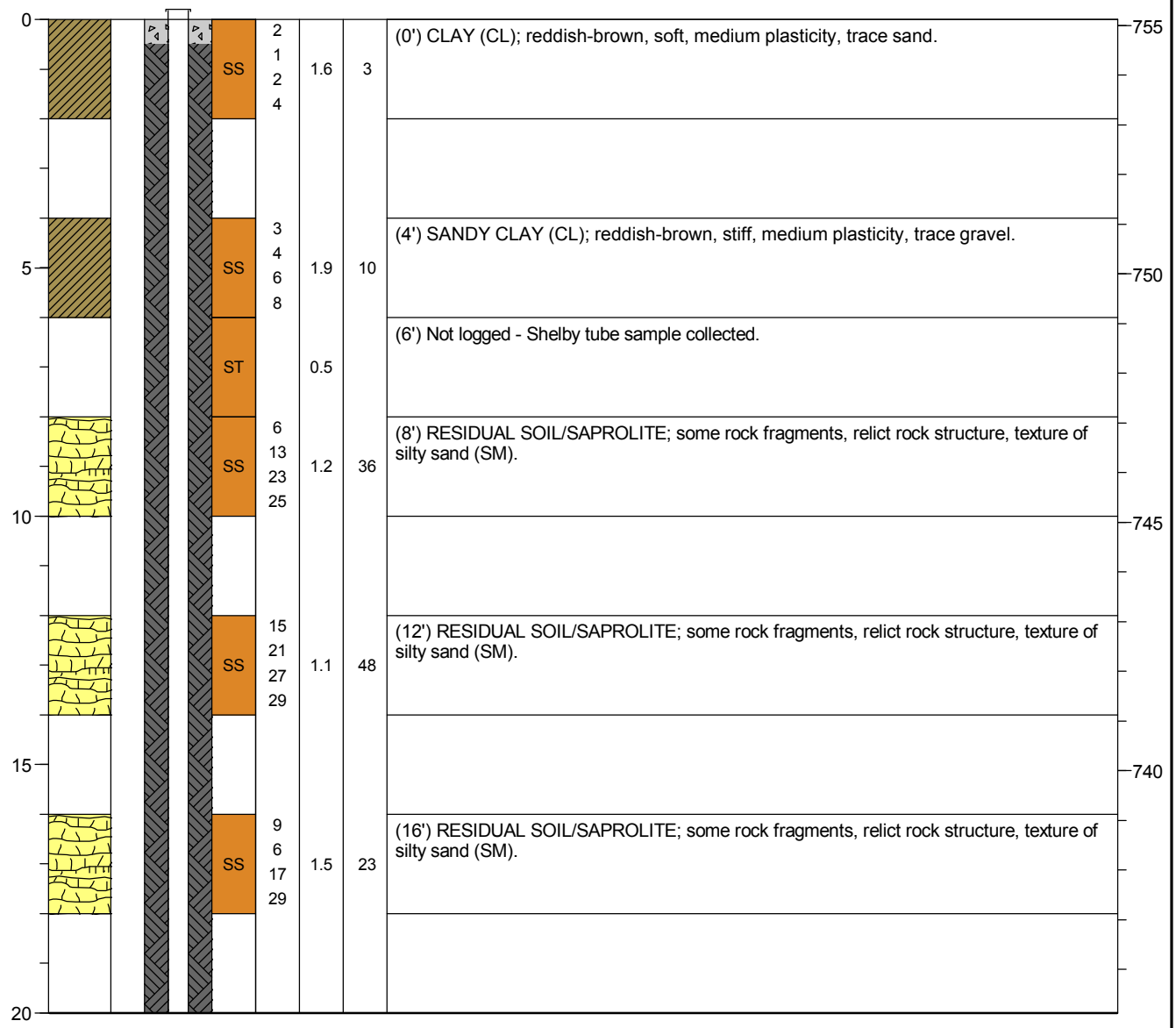
Client: Southern Company Services
Project: Plant Wansley Landfill Expansion Investig.
Address: 1371 Liberty Church Rd, Carrollton, GA

WELL LOG
Well No. GS-101
Page: 1 of 3

Drilling Start Date:	**01/21/2022**	Boring Depth (ft):	**51**	Well Depth (ft):	**50.25**
Drilling End Date:	**01/22/2022**	Boring Diameter (in):	**3.8**	Well Diameter (in):	**2**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**	Screen Slot (in):	**0.010**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NM**	Riser Material:	**Sch 40 PVC**
Drilling Equipment:	**Dietrich D-50**	Ground Surface Elev. (ft NAVD 88):	**755.12**	Screen Material:	**Sch 40 PVC Slotted**
Driller:	**P. Pitts**	Top of Casing Elev. (ft):	**757.29**	Seal Material(s):	**Grout/Bentonite**
Logged By:	**D. Kegley**	Location (N,E):	**1239073.05, 2026776.34**	Filter Pack:	**20/40 Sand**



NOTES: Piezometer completed with aboveground PVC stickup.

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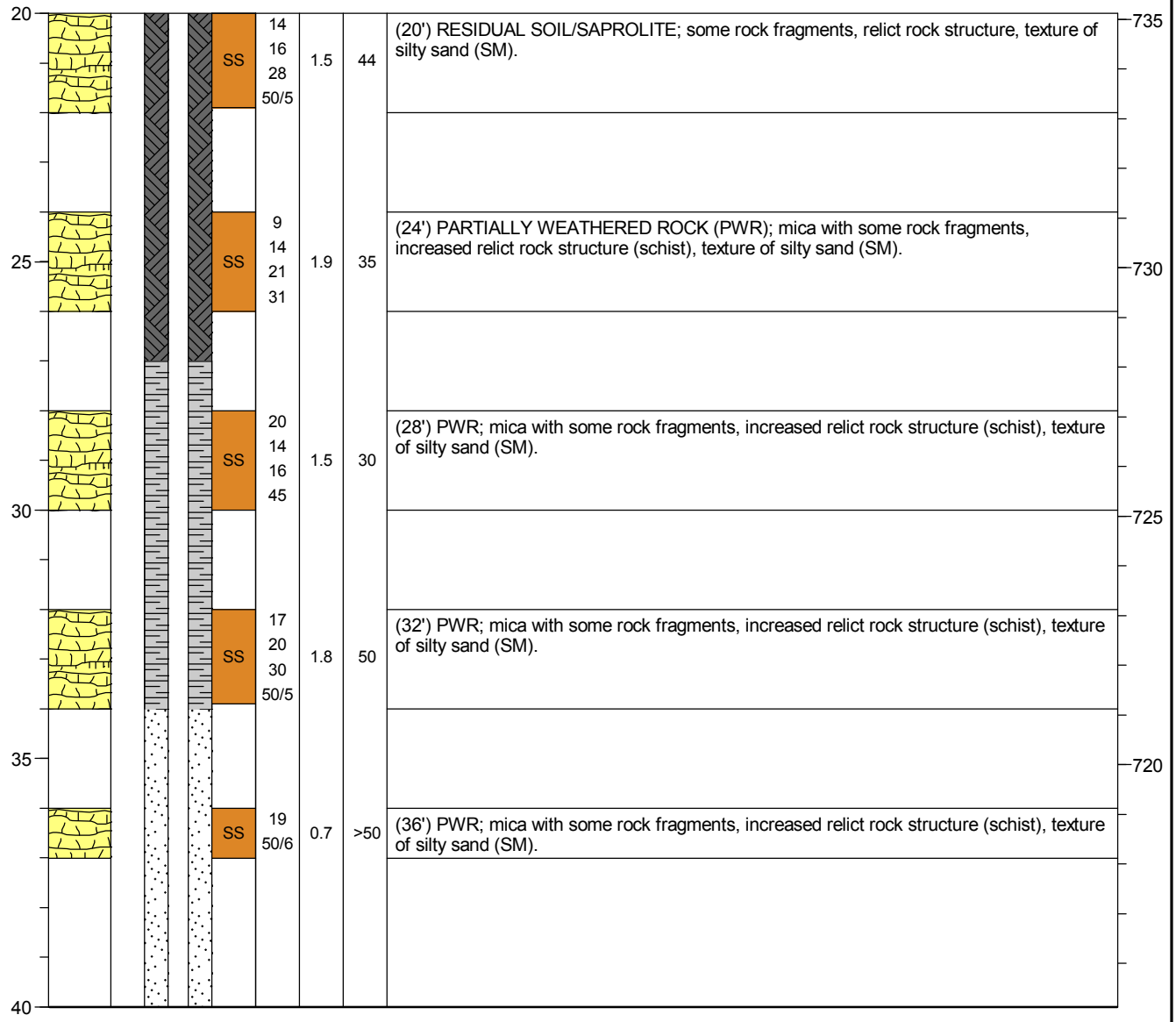
WELL LOG
Well No. GS-101
Page: 2 of 3

Drilling Start Date:	**01/21/2022**	Boring Depth (ft):	**51**	Well Depth (ft):	**50.25**
Drilling End Date:	**01/22/2022**	Boring Diameter (in):	**3.8**	Well Diameter (in):	**2**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**	Screen Slot (in):	**0.010**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NM**	Riser Material:	**Sch 40 PVC**
Drilling Equipment:	**Dietrich D-50**	Ground Surface Elev. (ft NAVD 88):	**755.12**	Screen Material:	**Sch 40 PVC Slotted**
Driller:	**P. Pitts**	Top of Casing Elev. (ft):	**757.29**	Seal Material(s):	**Grout/Bentonite**
Logged By:	**D. Kegley**	Location (N,E):	**1239073.05, 2026776.34**	Filter Pack:	**20/40 Sand**



NOTES: Piezometer completed with aboveground PVC stickup.

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Address: 1371 Liberty Church Rd, Carrollton, GA

WELL LOG
Well No. GS-101
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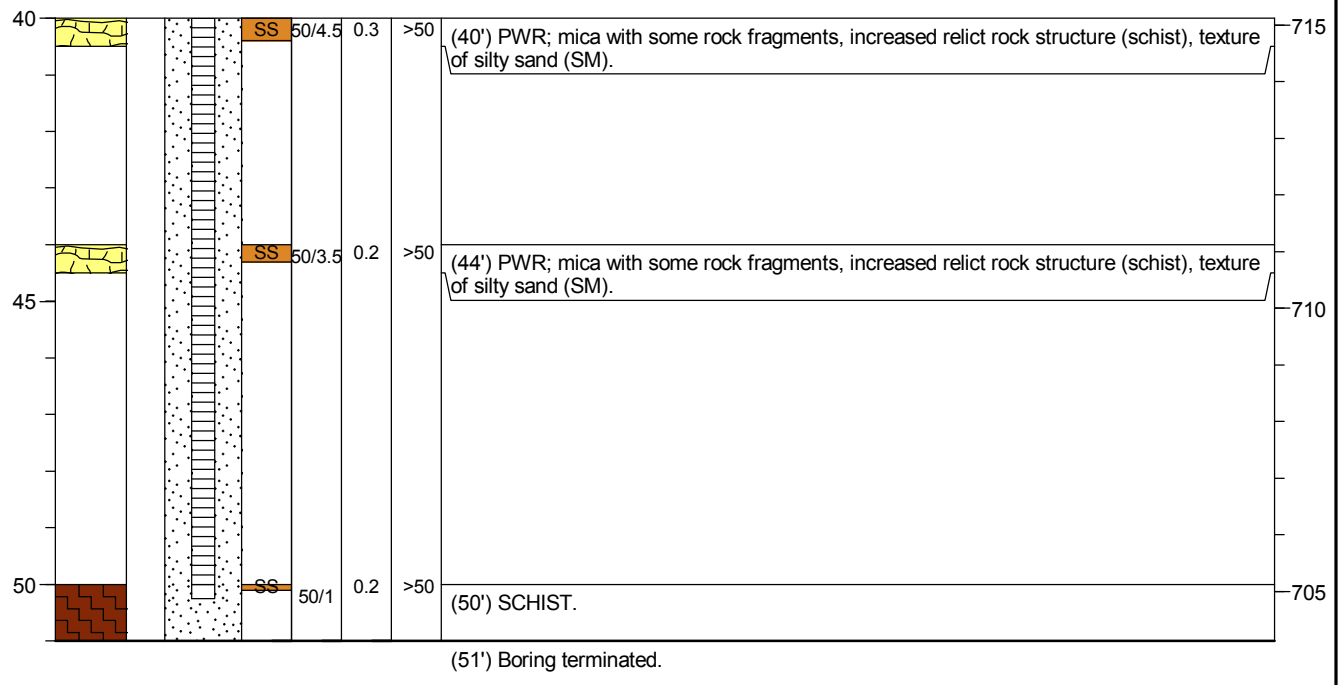
Drilling Start Date:	**01/21/2022**	Boring Depth (ft):	**51**	Well Depth (ft):	**50.25**
Drilling End Date:	**01/22/2022**	Boring Diameter (in):	**3.8**	Well Diameter (in):	**2**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**	Screen Slot (in):	**0.010**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NM**	Riser Material:	**Sch 40 PVC**
Drilling Equipment:	**Dietrich D-50**	Ground Surface Elev. (ft NAVD 88):	**755.12**	Screen Material:	**Sch 40 PVC Slotted**
Driller:	**P. Pitts**	Top of Casing Elev. (ft):	**757.29**	Seal Material(s):	**Grout/Bentonite**
Logged By:	**D. Kegley**	Location (N,E):	**1239073.05, 2026776.34**	Filter Pack:	**20/40 Sand**



NOTES: Piezometer completed with aboveground PVC stickup.

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WELL LOG
Well No. GS-102
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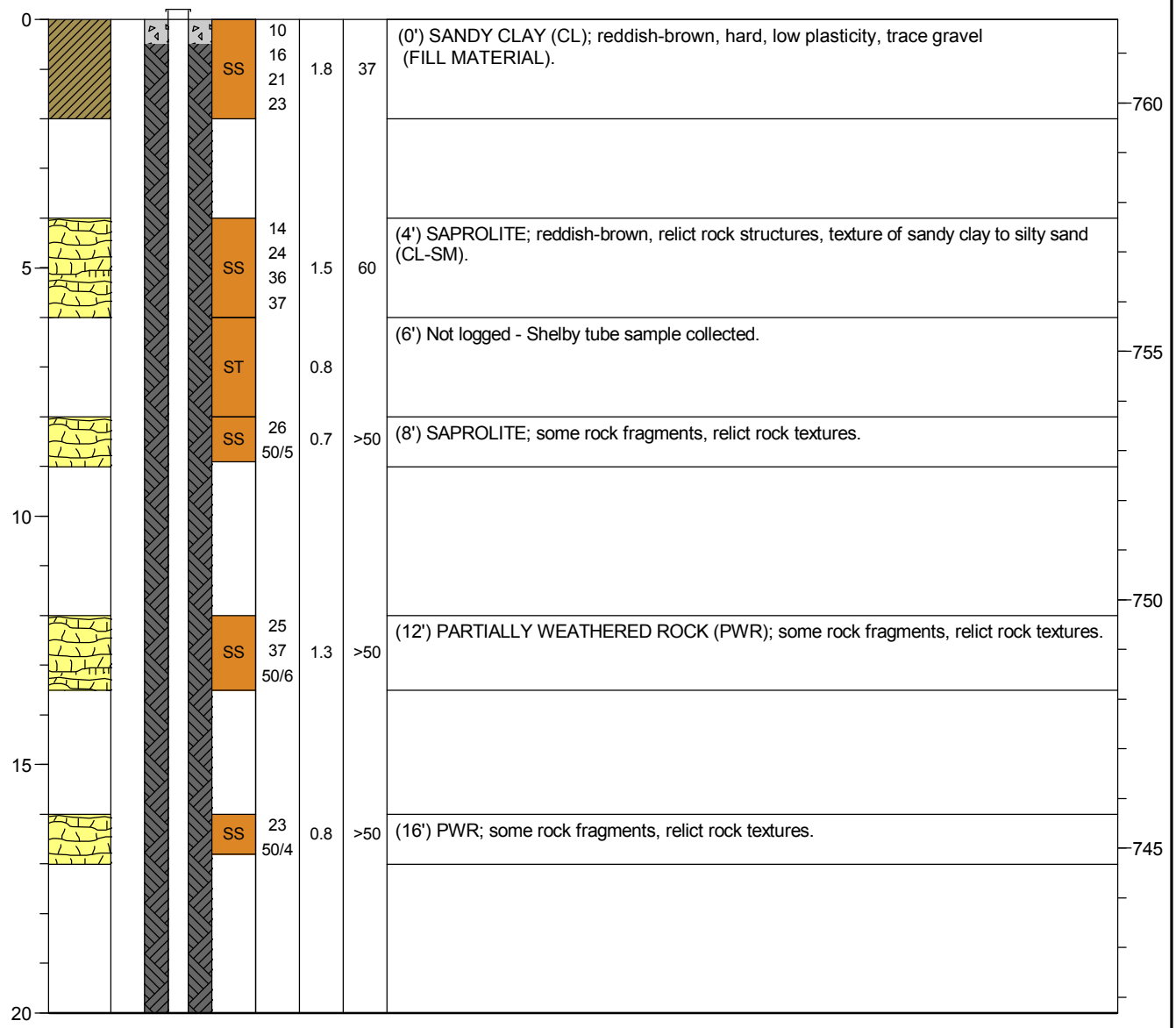
Drilling Start Date:	**01/10/2022**	Boring Depth (ft):	**47**	Well Depth (ft):	**44.25**
Drilling End Date:	**01/17/2022**	Boring Diameter (in):	**3.8**	Well Diameter (in):	**2**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**	Screen Slot (in):	**0.010**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NM**	Riser Material:	**Sch 40 PVC**
Drilling Equipment:	**Dietrich D-50**	Ground Surface Elev. (ft NAVD 88):	**761.68**	Screen Material:	**Sch 40 PVC Slotted**
Driller:	**P. Pitts**	Top of Casing Elev. (ft):	**764.85**	Seal Material(s):	**Grout/Bentonite**
Logged By:	**D. Kegley**	Location (N,E):	**1238540.08, 2026891.14**	Filter Pack:	**20/40 Sand**



NOTES: Piezometer completed with aboveground PVC stickup.

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Project: Plant Wansley Landfill Expansion Investig.
Address: 1371 Liberty Church Rd, Carrollton, GA

WELL LOG
Well No. GS-102
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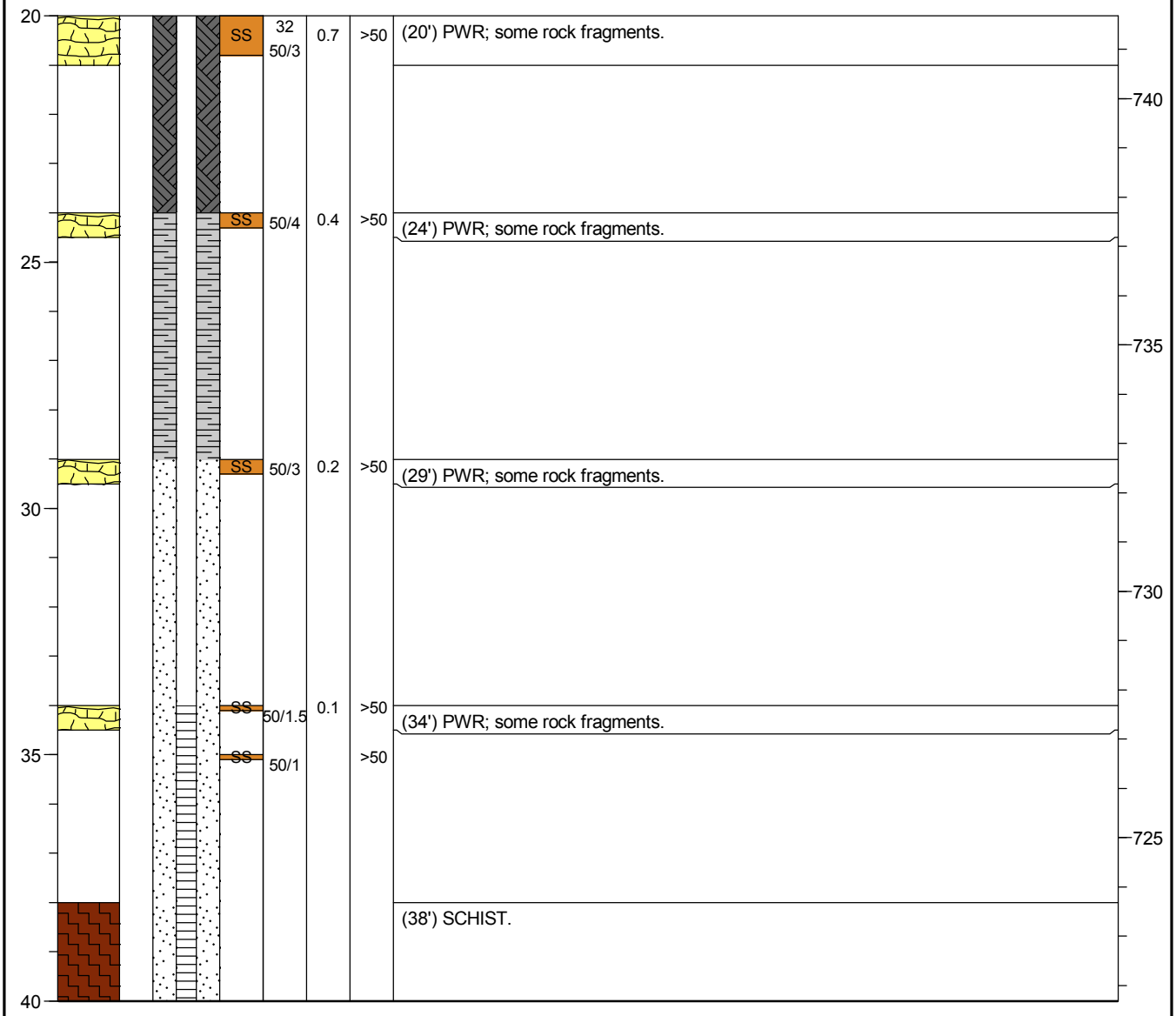
Drilling Start Date:	**01/10/2022**	Boring Depth (ft):	**47**	Well Depth (ft):	**44.25**
Drilling End Date:	**01/17/2022**	Boring Diameter (in):	**3.8**	Well Diameter (in):	**2**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**	Screen Slot (in):	**0.010**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NM**	Riser Material:	**Sch 40 PVC**
Drilling Equipment:	**Dietrich D-50**	Ground Surface Elev. (ft NAVD 88):	**761.68**	Screen Material:	**Sch 40 PVC Slotted**
Driller:	**P. Pitts**	Top of Casing Elev. (ft):	**764.85**	Seal Material(s):	**Grout/Bentonite**
Logged By:	**D. Kegley**	Location (N,E):	**1238540.08, 2026891.14**	Filter Pack:	**20/40 Sand**



NOTES: Piezometer completed with aboveground PVC stickup.

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Project: Plant Wansley Landfill Expansion Investig.
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WELL LOG
Well No. GS-102
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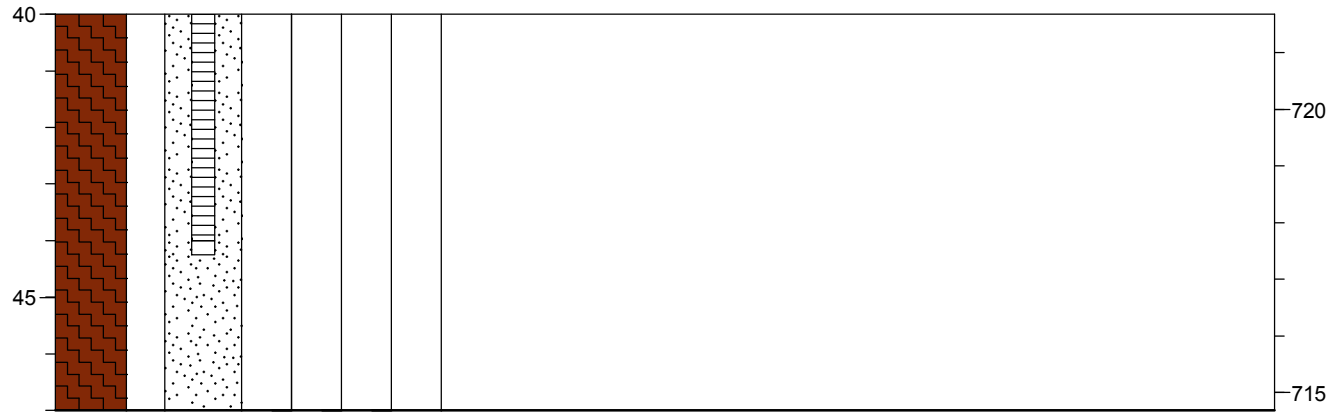
Drilling Start Date:	**01/10/2022**	Boring Depth (ft):	**47**	Well Depth (ft):	**44.25**
Drilling End Date:	**01/17/2022**	Boring Diameter (in):	**3.8**	Well Diameter (in):	**2**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**	Screen Slot (in):	**0.010**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NM**	Riser Material:	**Sch 40 PVC**
Drilling Equipment:	**Dietrich D-50**	Ground Surface Elev. (ft NAVD 88):	**761.68**	Screen Material:	**Sch 40 PVC Slotted**
Driller:	**P. Pitts**	Top of Casing Elev. (ft):	**764.85**	Seal Material(s):	**Grout/Bentonite**
Logged By:	**D. Kegley**	Location (N,E):	**1238540.08, 2026891.14**	Filter Pack:	**20/40 Sand**

DEPTH (FT)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)



(47') Boring terminated.

NOTES: Piezometer completed with aboveground PVC stickup.

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WELL LOG
Well No. GS-103
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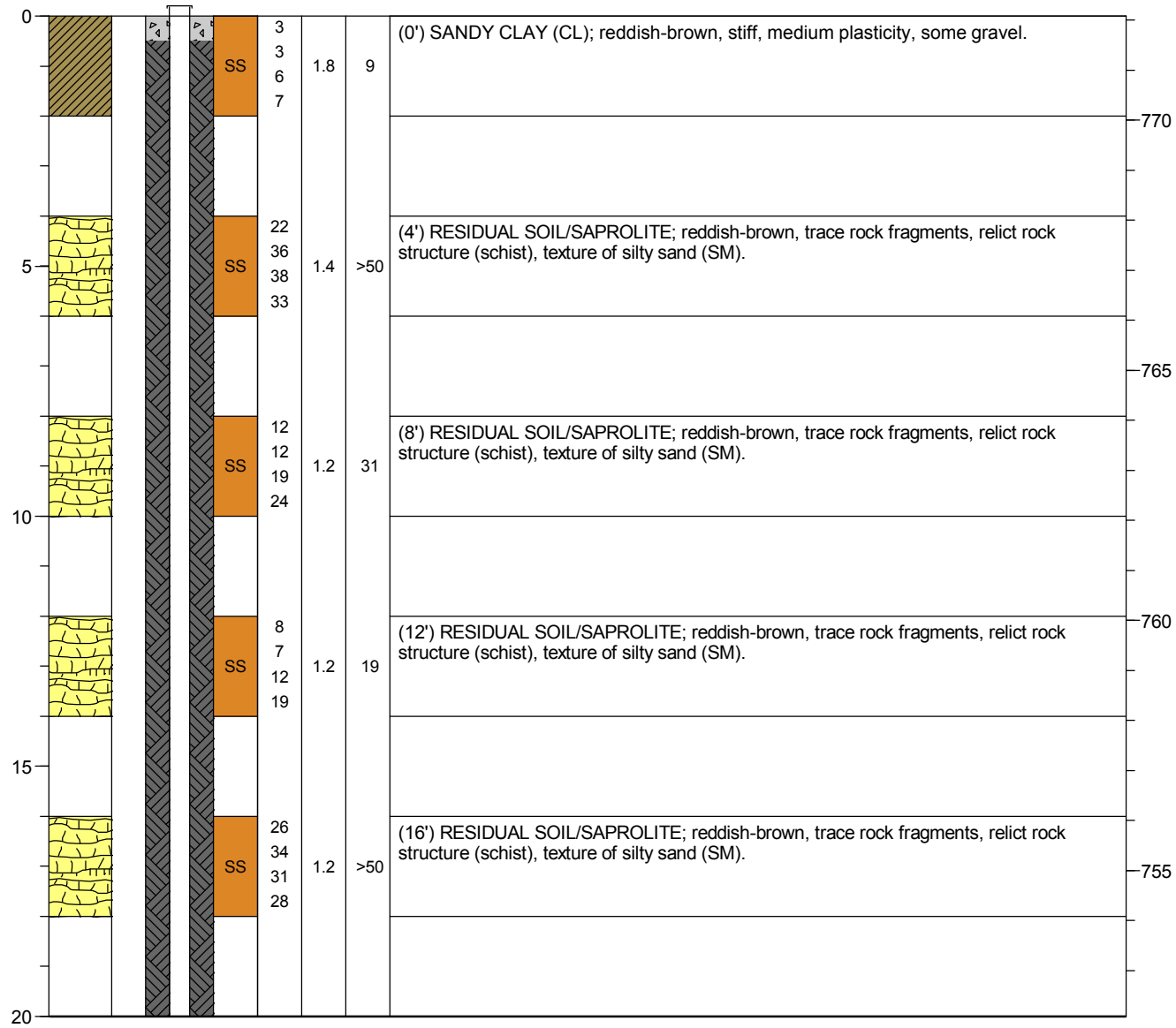
Drilling Start Date:	**02/01/2022**	Boring Depth (ft):	**58**	Well Depth (ft):	**57.25**
Drilling End Date:	**02/02/2022**	Boring Diameter (in):	**3.8**	Well Diameter (in):	**2**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**	Screen Slot (in):	**0.010**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**33.00**	Riser Material:	**Sch 40 PVC**
Drilling Equipment:	**Dietrich D-50**	Ground Surface Elev. (ft NAVD 88):	**772.08**	Screen Material:	**Sch 40 PVC Slotted**
Driller:	**P. Pitts**	Top of Casing Elev. (ft):	**773.89**	Seal Material(s):	**Grout/Bentonite**
Logged By:	**D. Kegley**	Location (N,E):	**1239177.4, 2027276.15**	Filter Pack:	**20/40 Sand**



NOTES: Piezometer completed with aboveground PVC stickup.

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Project: Plant Wansley Landfill Expansion Investig.
Address: 1371 Liberty Church Rd, Carrollton, GA

WELL LOG
Well No. GS-103
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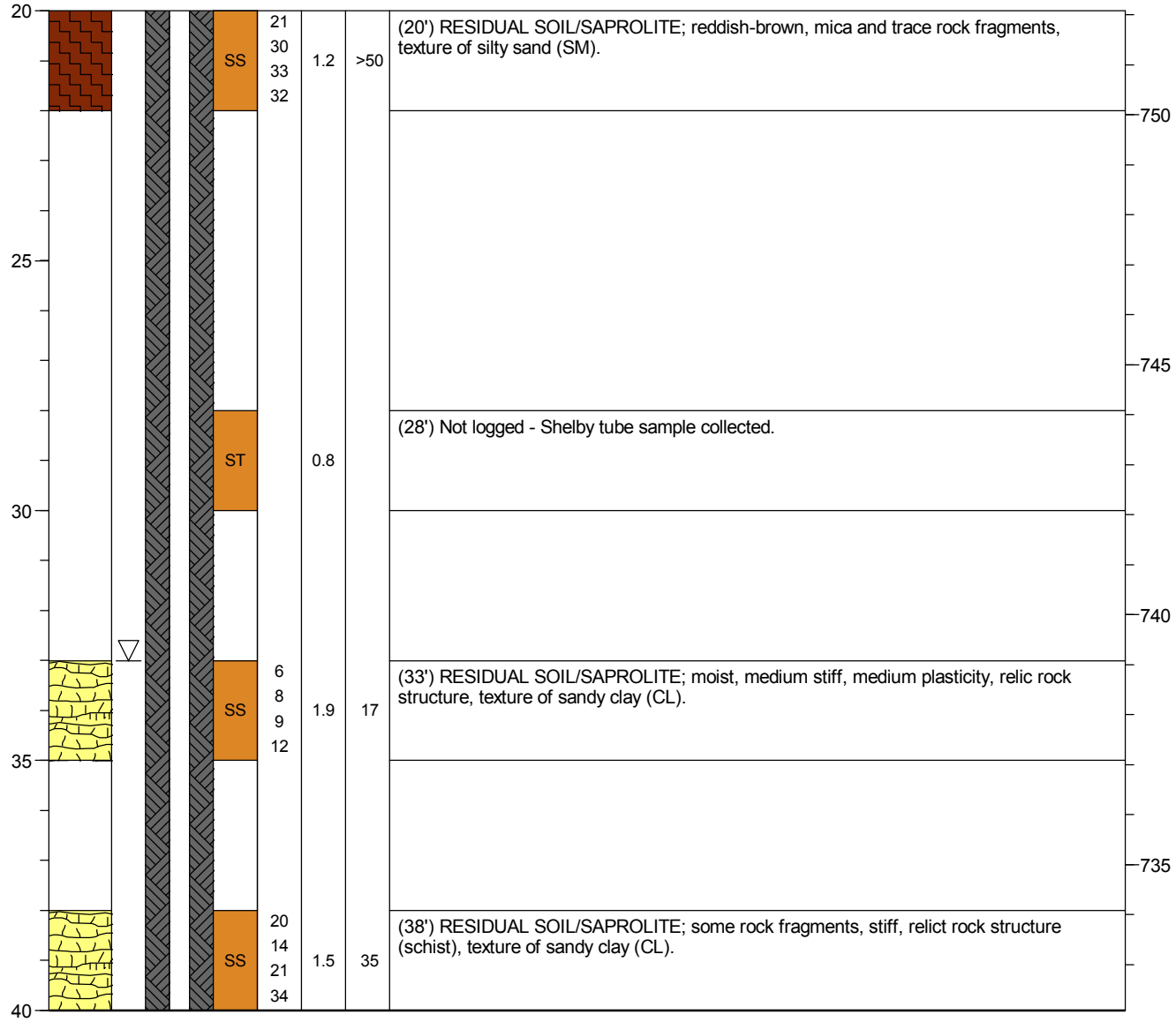
Drilling Start Date:	**02/01/2022**	Boring Depth (ft):	**58**	Well Depth (ft):	**57.25**
Drilling End Date:	**02/02/2022**	Boring Diameter (in):	**3.8**	Well Diameter (in):	**2**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**	Screen Slot (in):	**0.010**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**33.00**	Riser Material:	**Sch 40 PVC**
Drilling Equipment:	**Dietrich D-50**	Ground Surface Elev. (ft NAVD 88):	**772.08**	Screen Material:	**Sch 40 PVC Slotted**
Driller:	**P. Pitts**	Top of Casing Elev. (ft):	**773.89**	Seal Material(s):	**Grout/Bentonite**
Logged By:	**D. Kegley**	Location (N,E):	**1239177.4, 2027276.15**	Filter Pack:	**20/40 Sand**



NOTES: Piezometer completed with aboveground PVC stickup.

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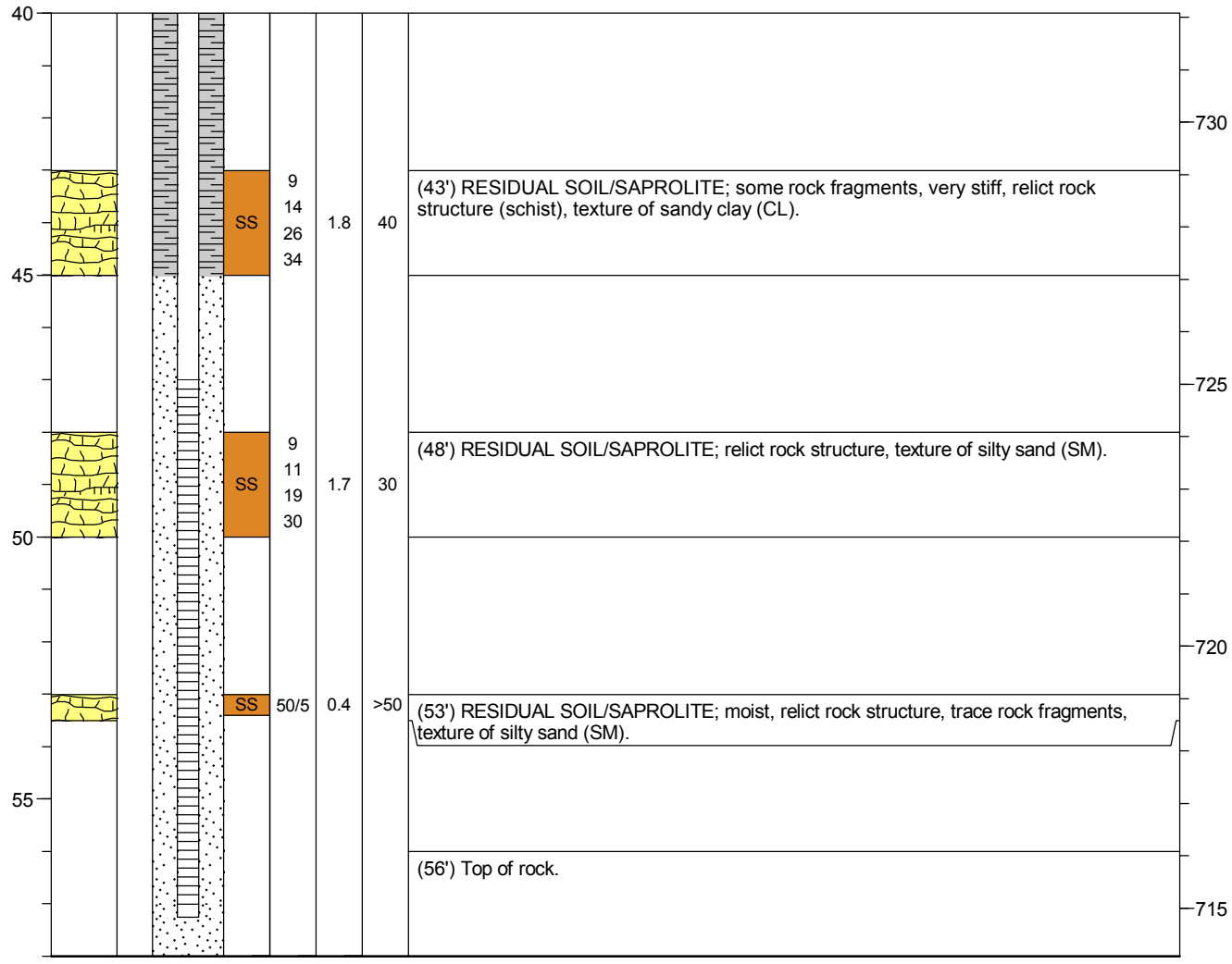
Client: Southern Company Services
Project: Plant Wansley Landfill Expansion Investig.
Address: 1371 Liberty Church Rd, Carrollton, GA

WELL LOG
Well No. GS-103
Page: 3 of 3

Drilling Start Date:	02/01/2022	Boring Depth (ft):	58	Well Depth (ft):	57.25
Drilling End Date:	02/02/2022	Boring Diameter (in):	3.8	Well Diameter (in):	2
Drilling Company:	Thompson Engineering	Sampling Method(s):	SPT	Screen Slot (in):	0.010
Drilling Method:	Mud Rotary	DTW During Drilling (ft):	33.00	Riser Material:	Sch 40 PVC
Drilling Equipment:	Dietrich D-50	Ground Surface Elev. (ft NAVD 88):	772.08	Screen Material:	Sch 40 PVC Slotted
Driller:	P. Pitts	Top of Casing Elev. (ft):	773.89	Seal Material(s):	Grout/Bentonite
Logged By:	D. Kegley	Location (N,E):	1239177.4, 2027276.15	Filter Pack:	20/40 Sand



NOTES: Piezometer completed with aboveground PVC stickup.

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WELL LOG
Well No. GS-104
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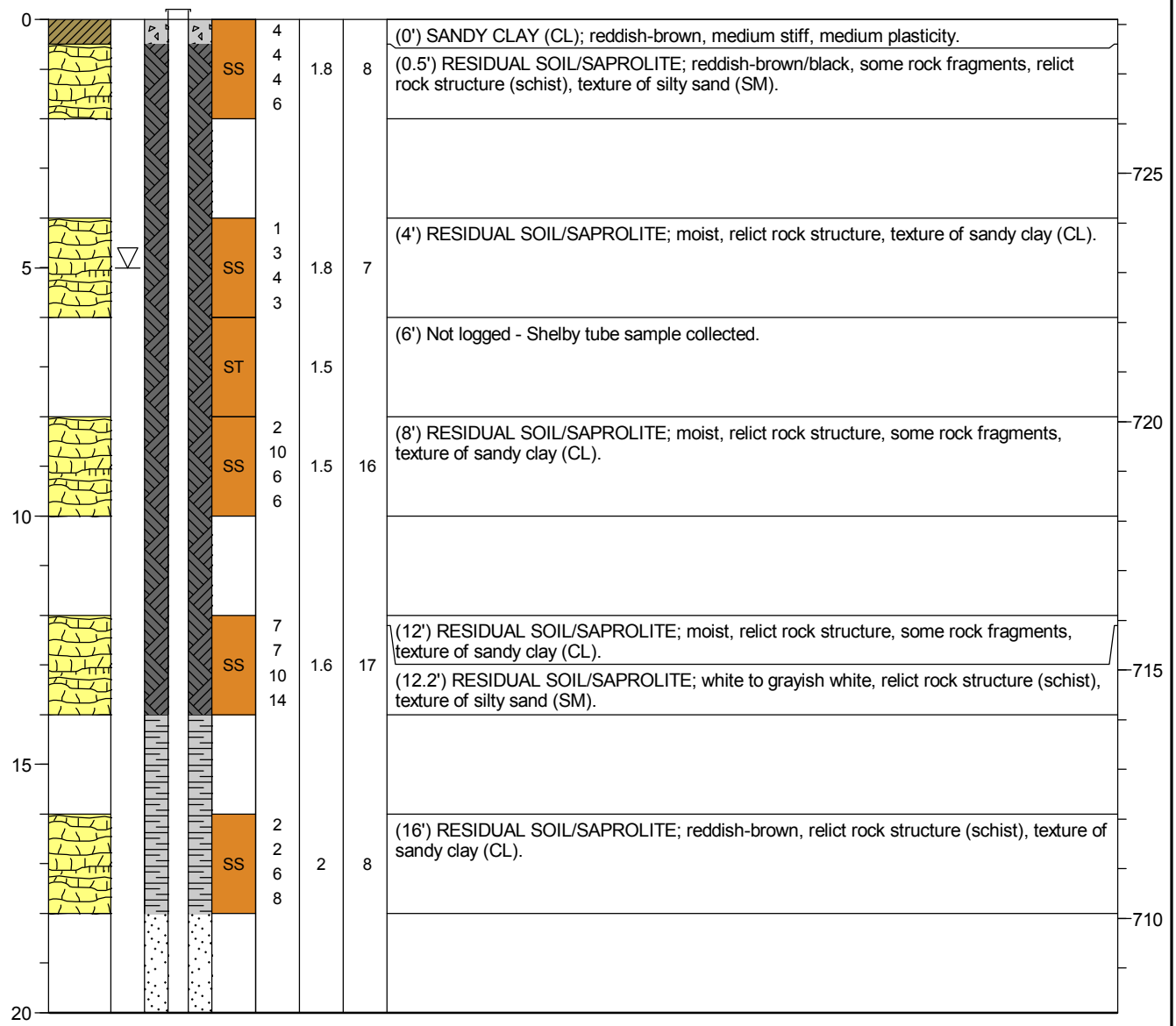
Drilling Start Date:	**01/31/2022**	Boring Depth (ft):	**51**	Well Depth (ft):	**30.25**
Drilling End Date:	**02/01/2022**	Boring Diameter (in):	**3.8**	Well Diameter (in):	**2**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**	Screen Slot (in):	**0.010**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**5.00**	Riser Material:	**Sch 40 PVC**
Drilling Equipment:	**Dietrich D-50**	Ground Surface Elev. (ft NAVD 88):	**728.1**	Screen Material:	**Sch 40 PVC Slotted**
Driller:	**P. Pitts**	Top of Casing Elev. (ft):	**732.55**	Seal Material(s):	**Grout/Bentonite**
Logged By:	**D. Kegley**	Location (N,E):	**1238728.13, 2027282.36**	Filter Pack:	**20/40 Sand**



NOTES: Borehole backfilled to 31 feet bgs with bentonite chips prior to installing piezometer. Piezometer completed with aboveground PVC stickup.

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Project: Plant Wansley Landfill Expansion Investig.
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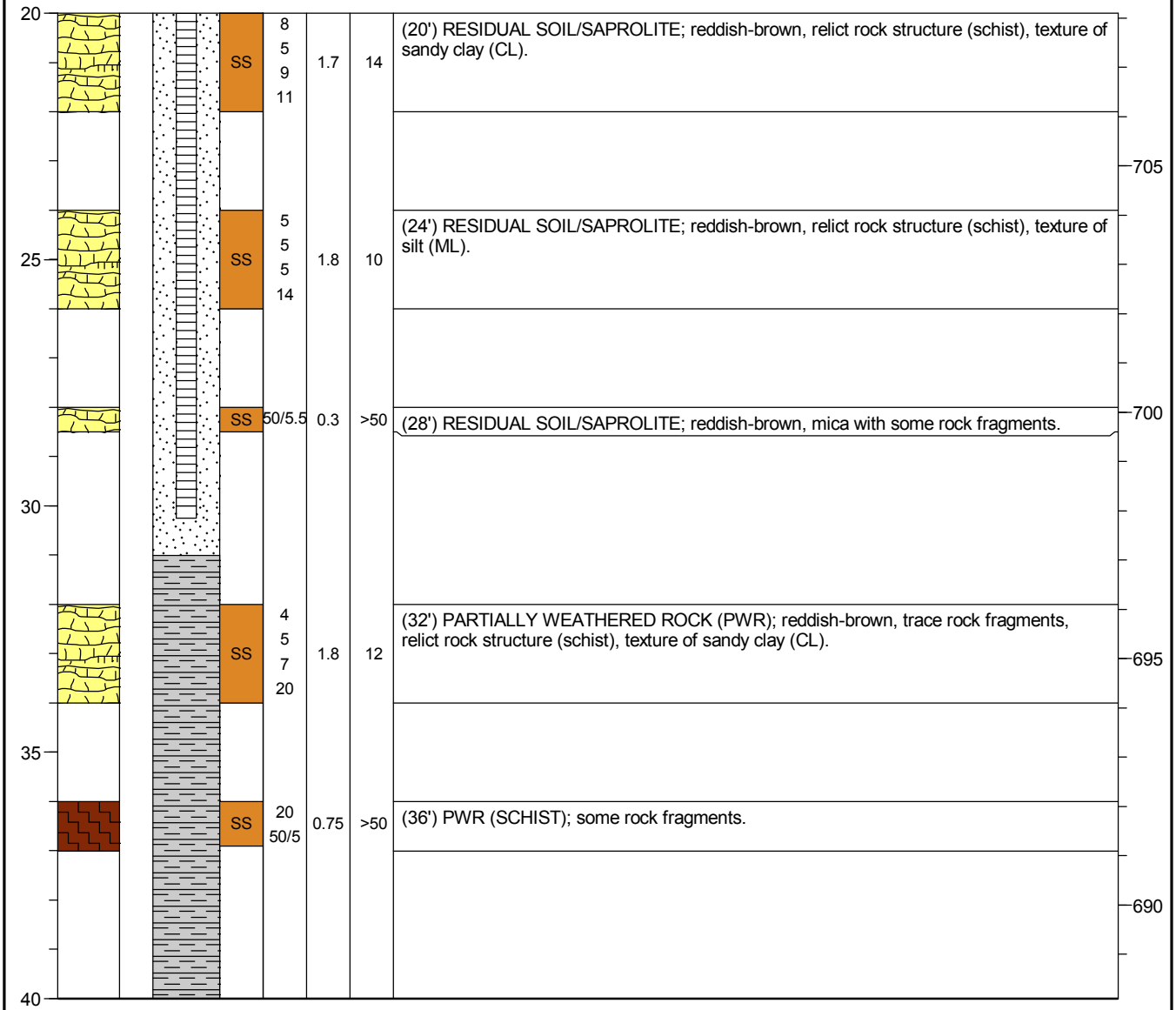
WELL LOG
Well No. GS-104
Page: 2 of 3

Drilling Start Date:	**01/31/2022**	Boring Depth (ft):	**51**	Well Depth (ft):	**30.25**
Drilling End Date:	**02/01/2022**	Boring Diameter (in):	**3.8**	Well Diameter (in):	**2**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**	Screen Slot (in):	**0.010**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**5.00**	Riser Material:	**Sch 40 PVC**
Drilling Equipment:	**Dietrich D-50**	Ground Surface Elev. (ft NAVD 88):	**728.1**	Screen Material:	**Sch 40 PVC Slotted**
Driller:	**P. Pitts**	Top of Casing Elev. (ft):	**732.55**	Seal Material(s):	**Grout/Bentonite**
Logged By:	**D. Kegley**	Location (N,E):	**1238728.13, 2027282.36**	Filter Pack:	**20/40 Sand**



NOTES: Borehole backfilled to 31 feet bgs with bentonite chips prior to installing piezometer. Piezometer completed with aboveground PVC stickup.

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WELL LOG
Well No. GS-104
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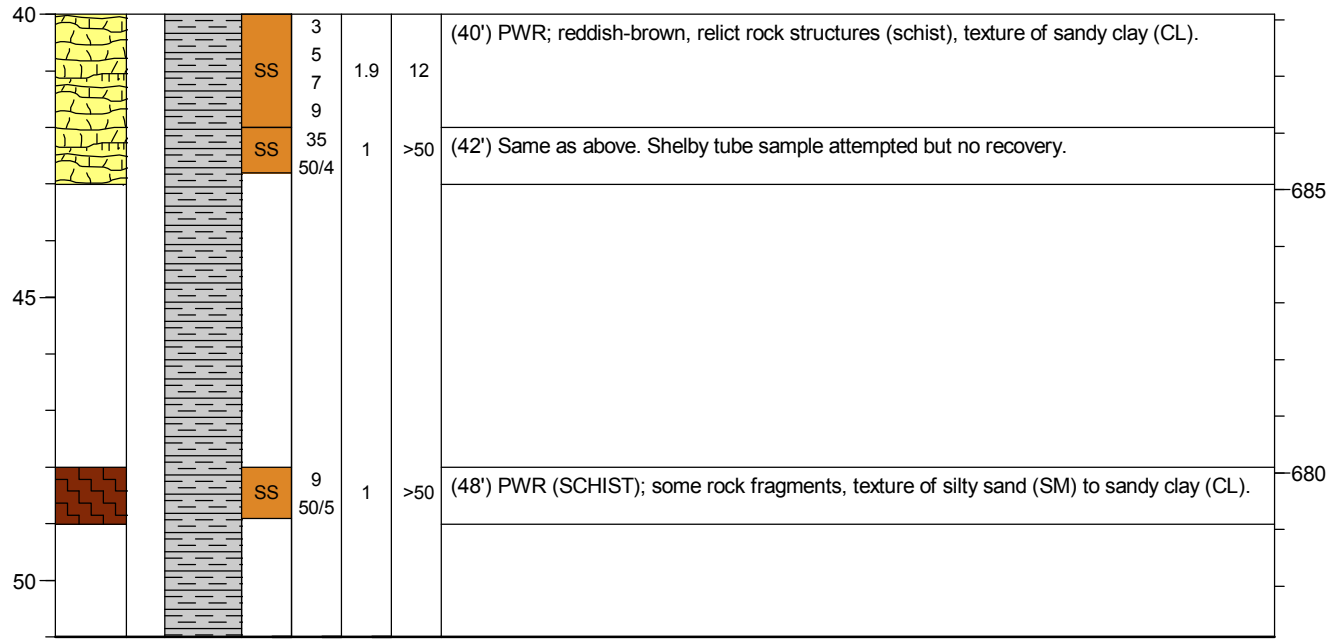
Drilling Start Date:	**01/31/2022**	Boring Depth (ft):	**51**	Well Depth (ft):	**30.25**
Drilling End Date:	**02/01/2022**	Boring Diameter (in):	**3.8**	Well Diameter (in):	**2**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**	Screen Slot (in):	**0.010**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**5.00**	Riser Material:	**Sch 40 PVC**
Drilling Equipment:	**Dietrich D-50**	Ground Surface Elev. (ft NAVD 88):	**728.1**	Screen Material:	**Sch 40 PVC Slotted**
Driller:	**P. Pitts**	Top of Casing Elev. (ft):	**732.55**	Seal Material(s):	**Grout/Bentonite**
Logged By:	**D. Kegley**	Location (N,E):	**1238728.13, 2027282.36**	Filter Pack:	**20/40 Sand**



DEPTH (FT)	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
40	SS	3 5 7 9	1.9	12	(40') PWR; reddish-brown, relict rock structures (schist), texture of sandy clay (CL).	
	SS	35 50/4	1	>50	(42') Same as above. Shelby tube sample attempted but no recovery.	685
45						
	SS	9 50/5	1	>50	(48') PWR (SCHIST); some rock fragments, texture of silty sand (SM) to sandy clay (CL).	680
50					(51') Boring terminated. Top of rock.	

NOTES: Borehole backfilled to 31 feet bgs with bentonite chips prior to installing piezometer. Piezometer completed with aboveground PVC stickup.

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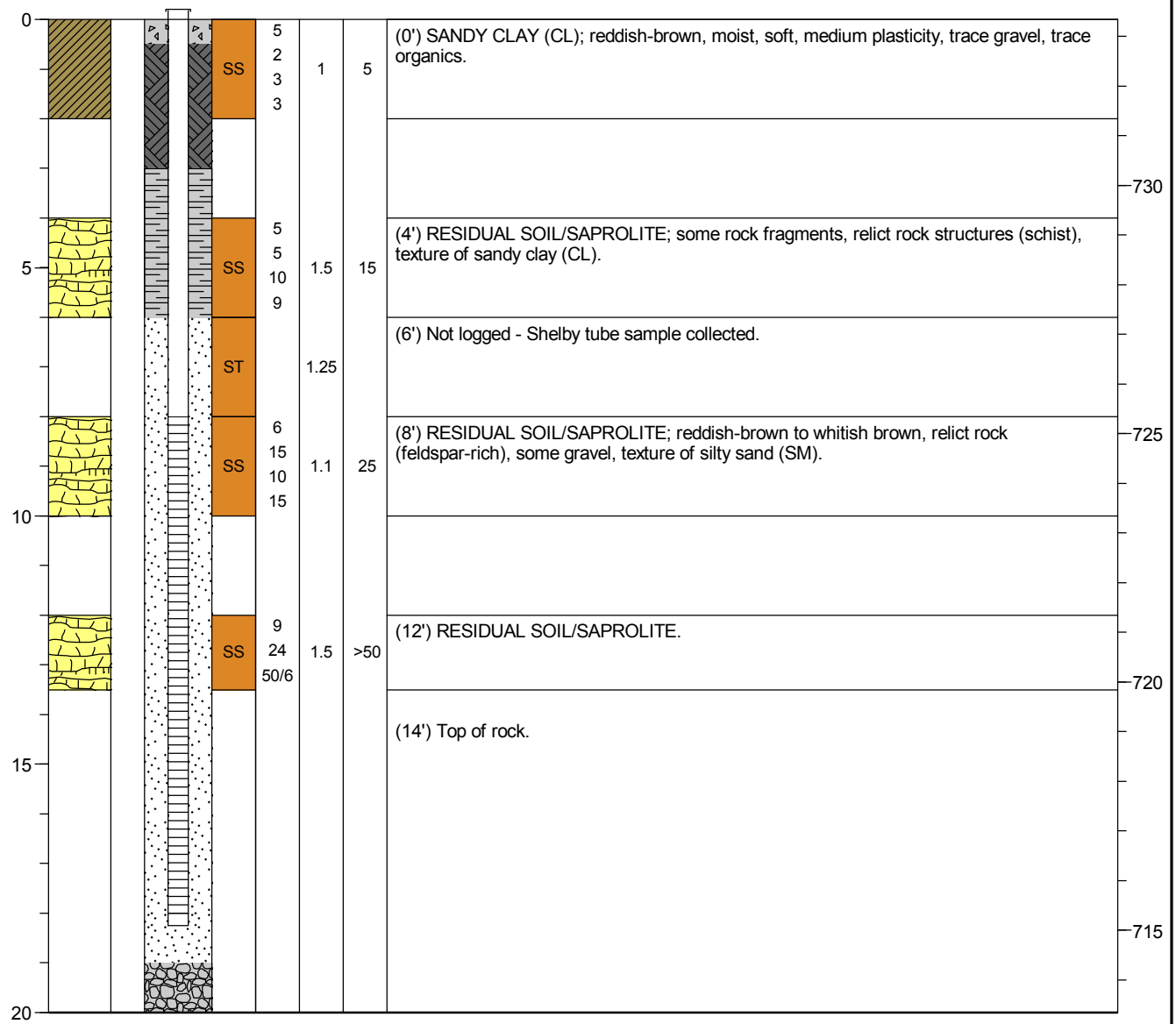
WELL LOG
Well No. GS-105
Page: 1 of 2

Drilling Start Date:	**02/04/2022**	Boring Depth (ft):	**21**	Well Depth (ft):	**18.25**
Drilling End Date:	**02/05/2022**	Boring Diameter (in):	**3.8**	Well Diameter (in):	**2**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**	Screen Slot (in):	**0.010**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NM**	Riser Material:	**Sch 40 PVC**
Drilling Equipment:	**Dietrich D-50**	Ground Surface Elev. (ft NAVD 88):	**733.34**	Screen Material:	**Sch 40 PVC Slotted**
Driller:	**P. Pitts**	Top of Casing Elev. (ft):	**735.65**	Seal Material(s):	**Grout/Bentonite**
Logged By:	**D. Kegley**	Location (N,E):	**1238911.67, 2027727.21**	Filter Pack:	**20/40 Sand**



NOTES: Borehole backfilled to 19 feet bgs with native material prior to installing piezometer. Piezometer completed with aboveground PVC stickup.

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WELL LOG
Well No. GS-105
Page: 2 of 2

Drilling Start Date:	**02/04/2022**	Boring Depth (ft):	**21**	Well Depth (ft):	**18.25**
Drilling End Date:	**02/05/2022**	Boring Diameter (in):	**3.8**	Well Diameter (in):	**2**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**	Screen Slot (in):	**0.010**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NM**	Riser Material:	**Sch 40 PVC**
Drilling Equipment:	**Dietrich D-50**	Ground Surface Elev. (ft NAVD 88):	**733.34**	Screen Material:	**Sch 40 PVC Slotted**
Driller:	**P. Pitts**	Top of Casing Elev. (ft):	**735.65**	Seal Material(s):	**Grout/Bentonite**
Logged By:	**D. Kegley**	Location (N,E):	**1238911.67, 2027727.21**	Filter Pack:	**20/40 Sand**

DEPTH (FT)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
20								(21') Boring terminated.	

NOTES: Borehole backfilled to 19 feet bgs with native material prior to installing piezometer. Piezometer completed with aboveground PVC stickup.

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BORING LOG
Boring No. GS-106
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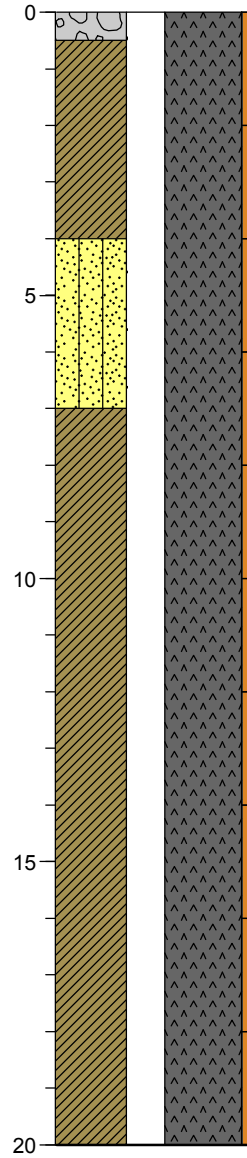
Drilling Start Date:	**12/19/2021**	Boring Depth (in):	**93**
Drilling End Date:	**12/19/2021**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT, Core Barrel**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**771.49**
Logged By:	**D. Kegley**	Location (N,E):	**1238423.69, 2026475.03**



DEPTH (FT)	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
0	SS	5 8 9 7	1	17	(0') GRAVEL (GP); fine to coarse grained, dike material. (0.5') SANDY CLAY (CL); reddish-brown, stiff, low plasticity, some gravel, dike material.	770
	SS	5 7 10 14	1.8	17	(2') Same as above.	
5	SS	7 11 12 12	1.4	23	(4') SILTY SAND (SM); reddish-brown, poorly graded, some gravel, dike material.	
	SS	15 12 16 21	1.5	28	(6') Same as above. (7') SANDY CLAY (CL); reddish-brown, stiff, some gravel, dike material.	765
	SS	8 14 10 12	1.5	24	(8') Same as above.	
10	SS	5 6 8 11	1.5	14	(10') Same as above.	760
	SS	5 5 12 15	1.7	17	(12') Same as above.	
15	SS	6 7 9 11	1.5	16	(14') Same as above.	
	SS	7 10 12 14	1.7	22	(16') Same as above.	755
20	SS	8 8 8 10	1	16	(18') Same as above.	

NOTES: SPT sampler driven from 26-26.6 hit refusal (blows = 19, 50/1.5; no recovery) before switching to core barrel. Boring backfilled to ground surface with cement/bentonite grout.

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Client: Southern Company Services
Project: Plant Wansley Landfill Expansion Investig.
Address: 1371 Liberty Church Rd, Carrollton, GA

BORING LOG
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Drilling Start Date:	**12/19/2021**	Boring Depth (in):	**93**
Drilling End Date:	**12/19/2021**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT, Core Barrel**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**771.49**
Logged By:	**D. Kegley**	Location (N,E):	**1238423.69, 2026475.03**

DEPTH (FT)	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
20	SS	4 7 9 12	1.5	16	(7') SANDY CLAY (CL); reddish-brown, stiff, some gravel, dike material. *(continued)* (20') Slightly lighter in color.	750
	SS	10 7 7 12	1.5	14	(22') With more gravel.	
	SS	14 50/6	0.5	>50	(24') Same as above. (24.5') Schist rock fragments. (25') No recovery.	
25	CB		0.8	0	(26') SCHIST/GNEISS micaceous, trace banding, fracture at 26.1' and mechanical breaks at 26'7 and 26'11.	745
	CB		0.2	0	(27.2') GNEISS/SCHIST; less micaceous, increased banding, only 2 inch recovery - broke through to soft material.	
30	SS	3 4 6 10	1.4	10	(32') SANDY CLAY (CL); reddish-brown, medium stiff, medium plasticity, trace gravel (Dike material).	740
35						735
	SS	1 1 1 1	1.5	2	(38') SANDY CLAY (CL); reddish-brown, moist, very soft, high plasticity, trace gravel.	
40						

NOTES: SPT sampler driven from 26-26.6 hit refusal (blows = 19, 50/1.5; no recovery) before switching to core barrel. Boring backfilled to ground surface with cement/bentonite grout.

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Project: Plant Wansley Landfill Expansion Investig.
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Drilling Start Date:	**12/19/2021**	Boring Depth (in):	**93**
Drilling End Date:	**12/19/2021**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT, Core Barrel**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**771.49**
Logged By:	**D. Kegley**	Location (N,E):	**1238423.69, 2026475.03**

DEPTH (FT)	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
40						730
	SS	1 1 1 3	2	2	(43') RESIDUAL SOIL/SAPROLITE; moist, very soft, high plasticity, relict rock structure, texture of sandy clay (SC).	
45						725
	SS	5 4 2 1	2	6	(48') RESIDUAL SOIL/SAPROLITE; moist, soft, high plasticity, trace rock fragments (schist), relict rock structure, texture of sandy clay (CL).	
50						720
	SS	10 14 26 24	1.5	40	(53') RESIDUAL SOIL/SAPROLITE; micaceous with increased rock fragments (schist), increased relict rock structure.	
55						715
	SS	7 12 50/5	1.1	>50	(58') RESIDUAL SOIL/SAPROLITE; micaceous with increased rock fragments (schist), increased relict rock structure.	
60						

NOTES: SPT sampler driven from 26-26.6 hit refusal (blows = 19, 50/1.5; no recovery) before switching to core barrel. Boring backfilled to ground surface with cement/bentonite grout.

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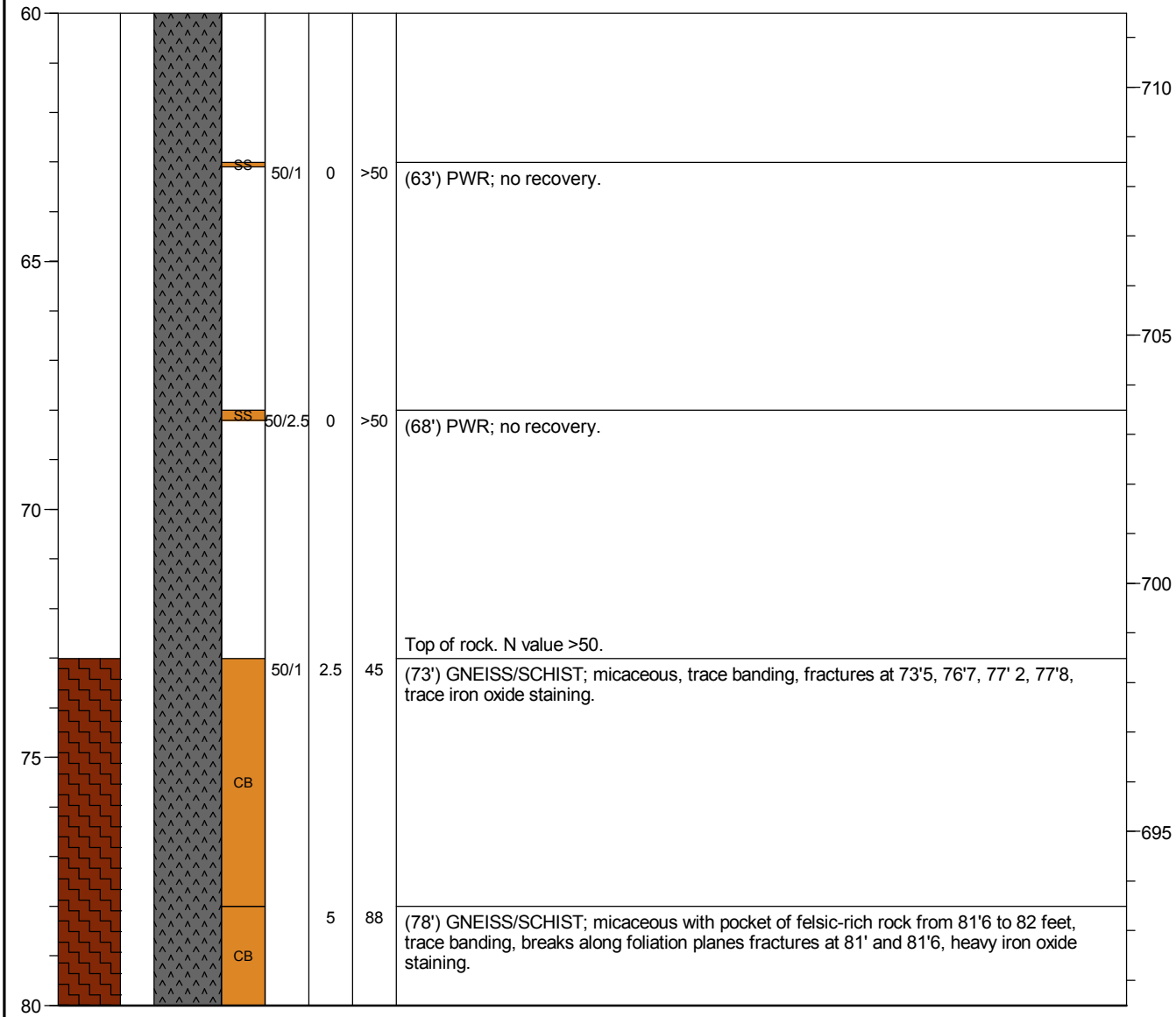
Drilling Start Date:	**12/19/2021**	Boring Depth (in):	**93**
Drilling End Date:	**12/19/2021**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT, Core Barrel**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**771.49**
Logged By:	**D. Kegley**	Location (N,E):	**1238423.69, 2026475.03**



DEPTH (FT)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
60				SS	50/1	0	>50	(63') PWR; no recovery.	710
65				SS	50/2.5	0	>50	(68') PWR; no recovery.	705
70								Top of rock. N value >50.	700
75				CB	50/1	2.5	45	(73') GNEISS/SCHIST; micaceous, trace banding, fractures at 73'5, 76'7, 77' 2, 77'8, trace iron oxide staining.	695
80				CB		5	88	(78') GNEISS/SCHIST; micaceous with pocket of felsic-rich rock from 81'6 to 82 feet, trace banding, breaks along foliation planes fractures at 81' and 81'6, heavy iron oxide staining.	

NOTES: SPT sampler driven from 26-26.6 hit refusal (blows = 19, 50/1.5; no recovery) before switching to core barrel. Boring backfilled to ground surface with cement/bentonite grout.

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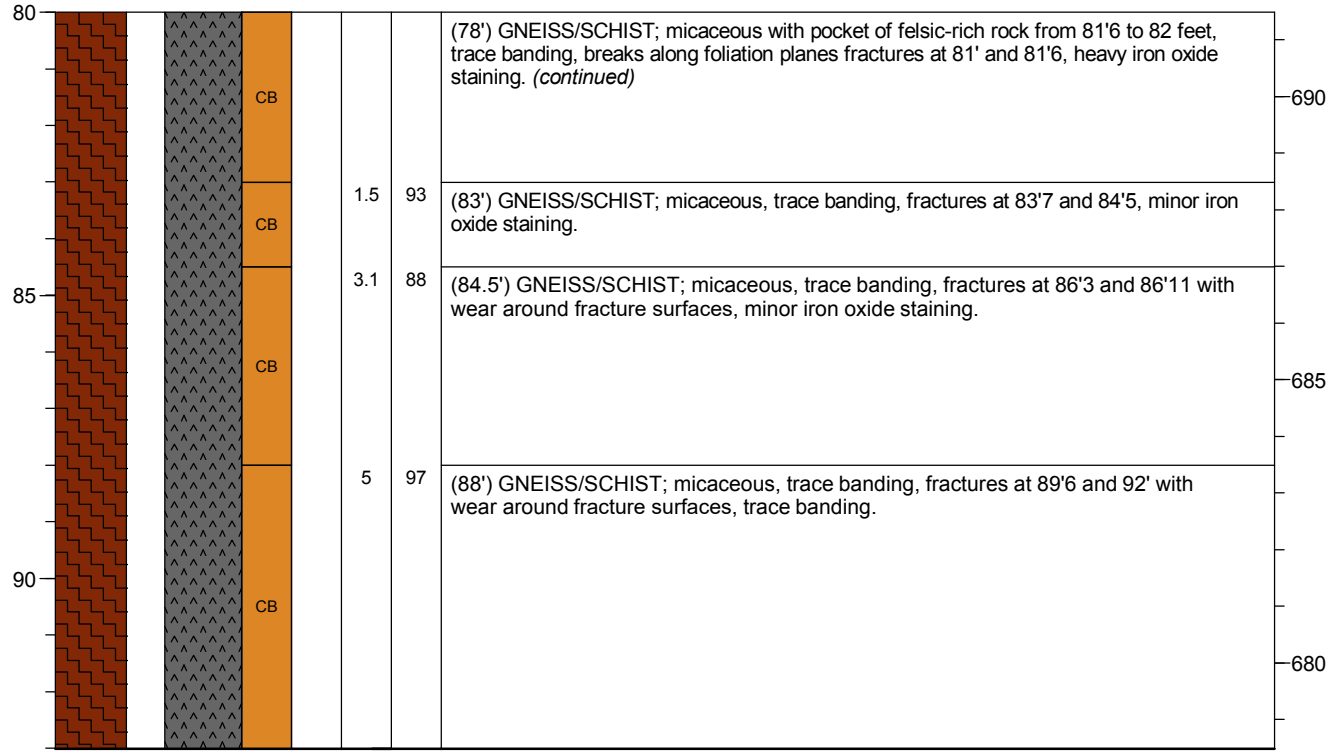
Drilling Start Date:	**12/19/2021**	Boring Depth (in):	**93**
Drilling End Date:	**12/19/2021**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT, Core Barrel**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**771.49**
Logged By:	**D. Kegley**	Location (N,E):	**1238423.69, 2026475.03**



DEPTH (FT)	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
			(78') GNEISS/SCHIST; micaceous with pocket of felsic-rich rock from 81'6 to 82 feet, trace banding, breaks along foliation planes fractures at 81' and 81'6, heavy iron oxide staining. *(continued)*	
	1.5	93	(83') GNEISS/SCHIST; micaceous, trace banding, fractures at 83'7 and 84'5, minor iron oxide staining.	
	3.1	88	(84.5') GNEISS/SCHIST; micaceous, trace banding, fractures at 86'3 and 86'11 with wear around fracture surfaces, minor iron oxide staining.	
	5	97	(88') GNEISS/SCHIST; micaceous, trace banding, fractures at 89'6 and 92' with wear around fracture surfaces, trace banding.	
			(93') Boring terminated.	

NOTES: SPT sampler driven from 26-26.6 hit refusal (blows = 19, 50/1.5; no recovery) before switching to core barrel. Boring backfilled to ground surface with cement/bentonite grout.

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Project: Plant Wansley Landfill Expansion Investig.
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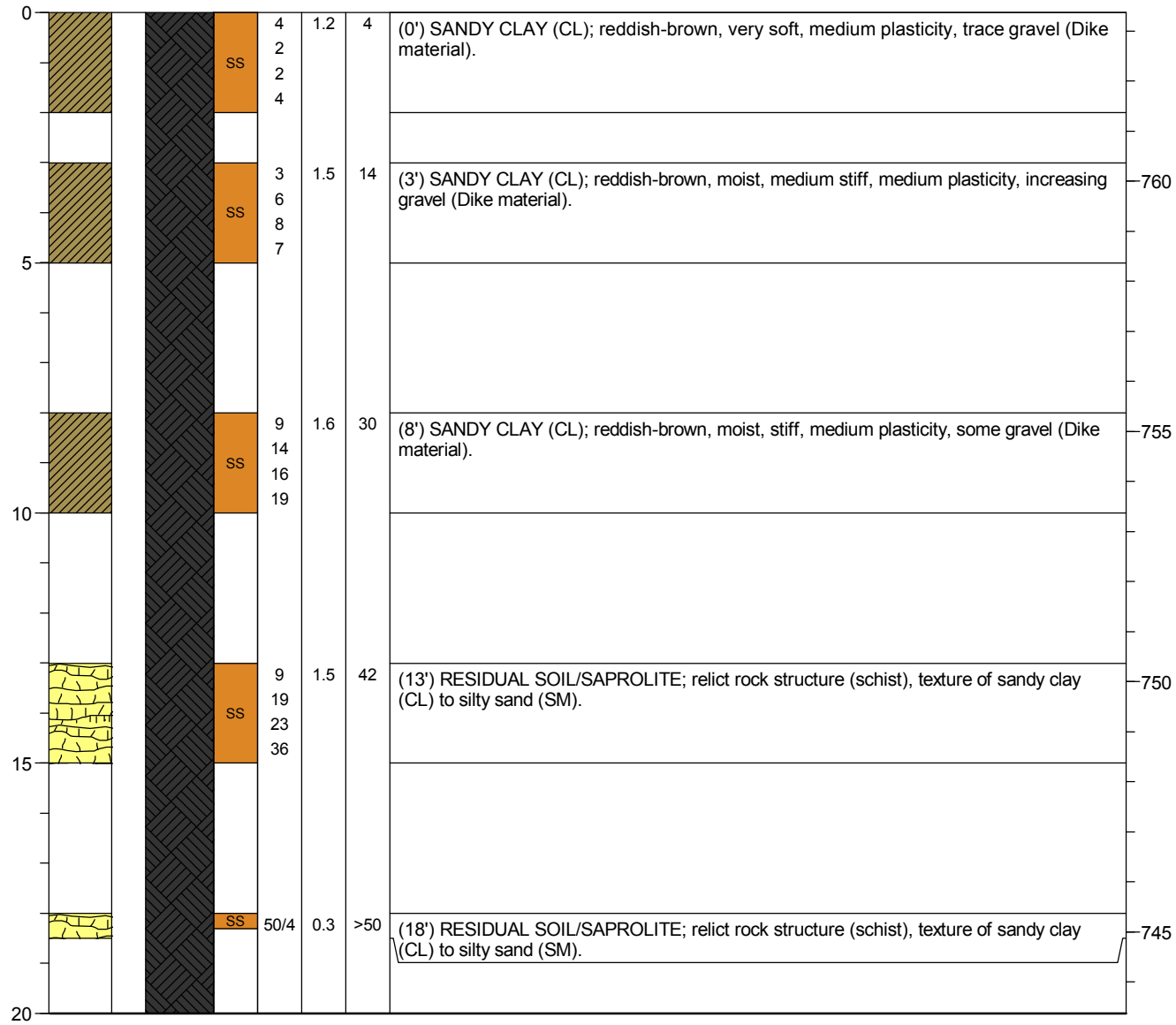
Drilling Start Date:	**02/10/2022**	Boring Depth (in):	**87**
Drilling End Date:	**02/10/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT, Core Barrel**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**763.37**
Logged By:	**D. Kegley**	Location (N,E):	**1238066.27, 2026599.33**



DEPTH (FT)	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
0	SS	4 2 2 4	1.2	4	(0') SANDY CLAY (CL); reddish-brown, very soft, medium plasticity, trace gravel (Dike material).	
	SS	3 6 8 7	1.5	14	(3') SANDY CLAY (CL); reddish-brown, moist, medium stiff, medium plasticity, increasing gravel (Dike material).	760
5	SS	9 14 16 19	1.6	30	(8') SANDY CLAY (CL); reddish-brown, moist, stiff, medium plasticity, some gravel (Dike material).	755
10	SS	9 19 23 36	1.5	42	(13') RESIDUAL SOIL/SAPROLITE; relict rock structure (schist), texture of sandy clay (CL) to silty sand (SM).	750
15	SS	50/4	0.3	>50	(18') RESIDUAL SOIL/SAPROLITE; relict rock structure (schist), texture of sandy clay (CL) to silty sand (SM).	745
20						

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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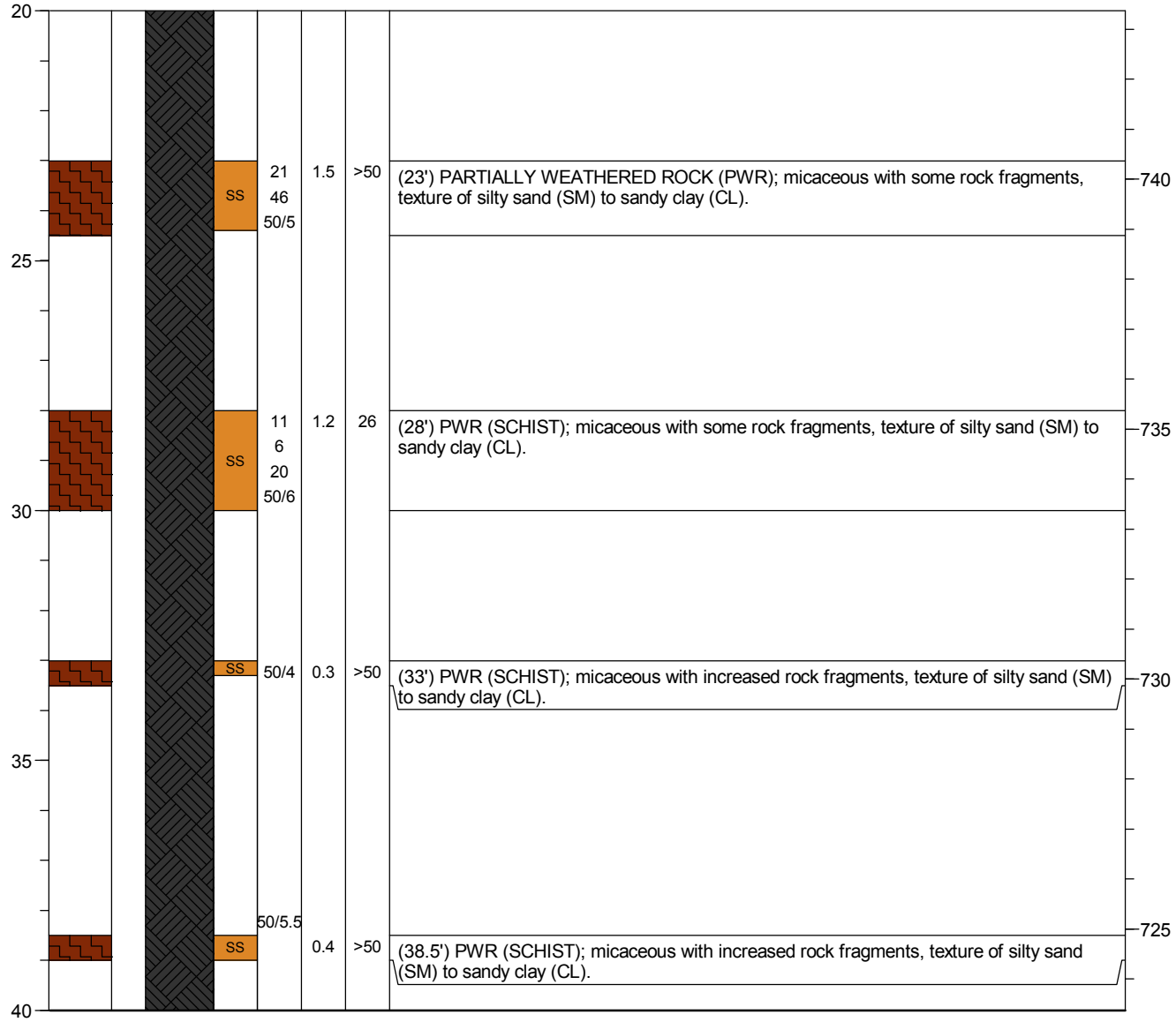
Drilling Start Date:	**02/10/2022**	Boring Depth (in):	**87**
Drilling End Date:	**02/10/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT, Core Barrel**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**763.37**
Logged By:	**D. Kegley**	Location (N,E):	**1238066.27, 2026599.33**



NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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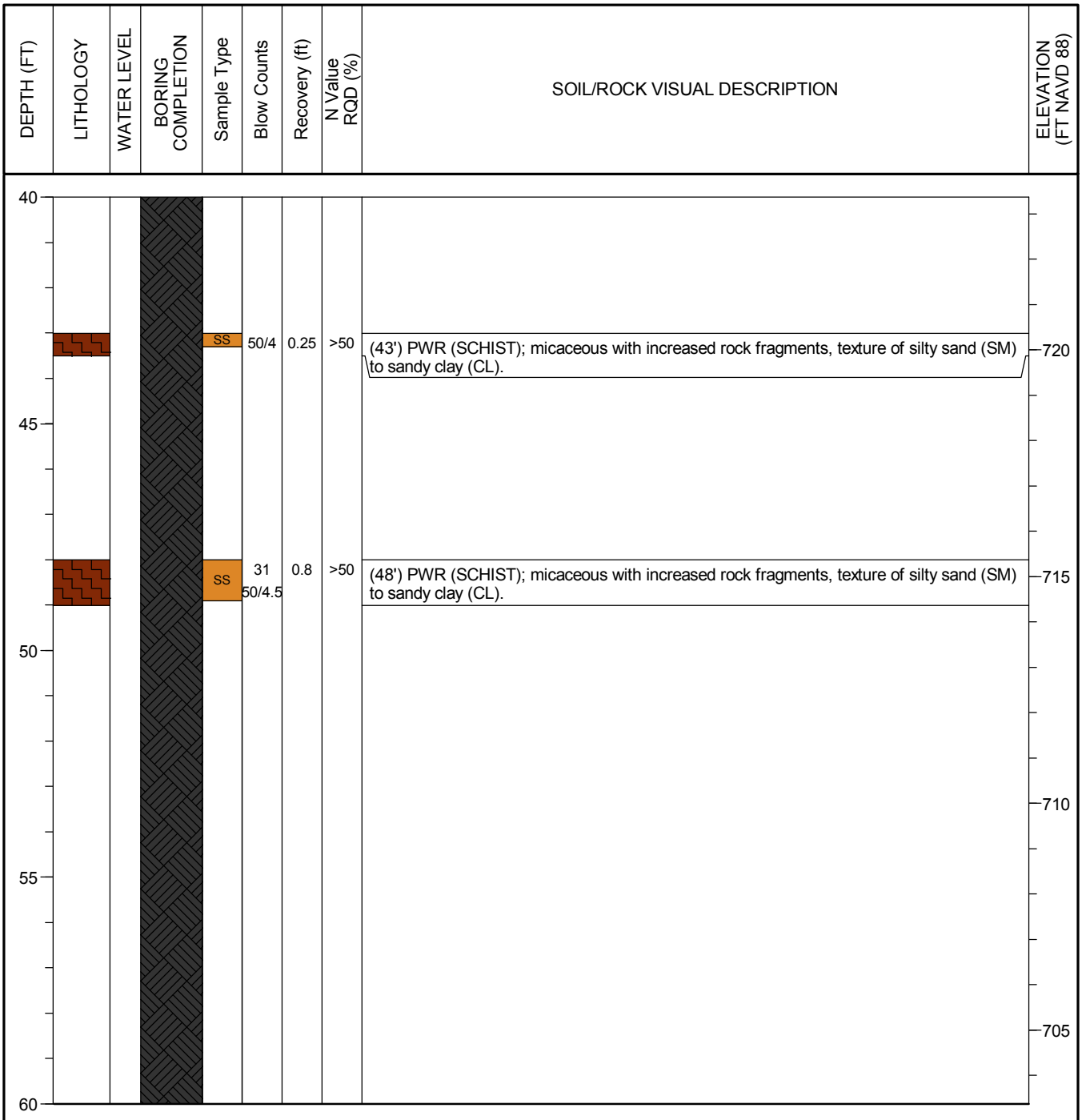
Drilling Start Date:	**02/10/2022**	Boring Depth (in):	**87**
Drilling End Date:	**02/10/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT, Core Barrel**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**763.37**
Logged By:	**D. Kegley**	Location (N,E):	**1238066.27, 2026599.33**



NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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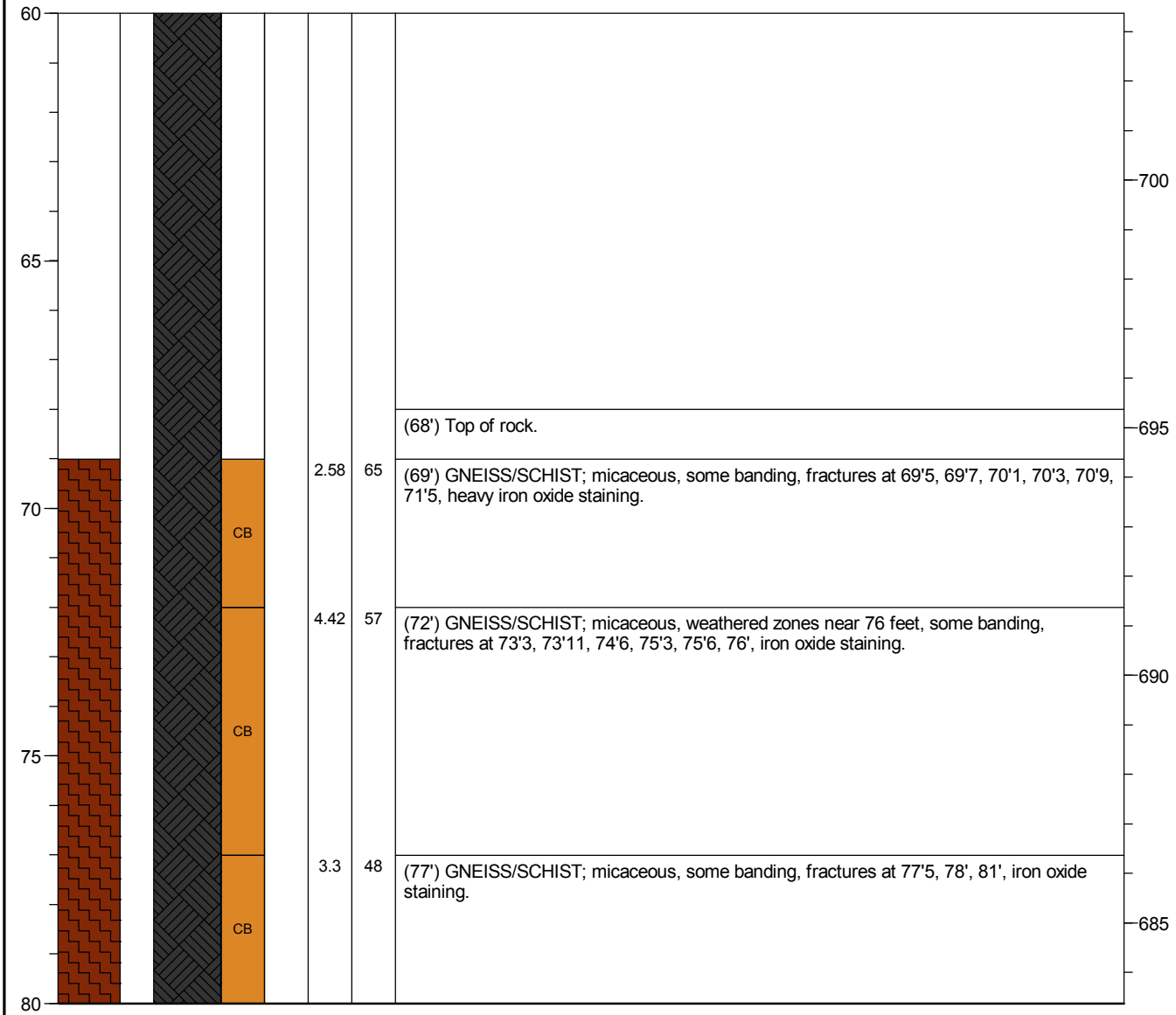
Drilling Start Date:	**02/10/2022**	Boring Depth (in):	**87**
Drilling End Date:	**02/10/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT, Core Barrel**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**763.37**
Logged By:	**D. Kegley**	Location (N,E):	**1238066.27, 2026599.33**



NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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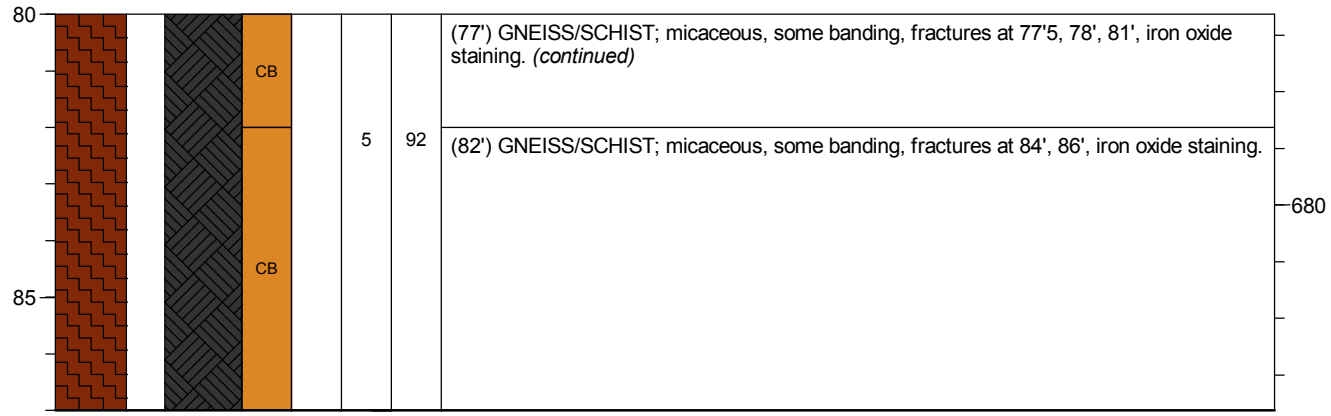
Drilling Start Date:	**02/10/2022**	Boring Depth (in):	**87**
Drilling End Date:	**02/10/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT, Core Barrel**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**763.37**
Logged By:	**D. Kegley**	Location (N,E):	**1238066.27, 2026599.33**



DEPTH (FT)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
80				CB		5	92	(77') GNEISS/SCHIST; micaceous, some banding, fractures at 77'5, 78', 81', iron oxide staining. *(continued)*	
85				CB				(82') GNEISS/SCHIST; micaceous, some banding, fractures at 84', 86', iron oxide staining.	680

(87') Boring terminated.

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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Drilling Start Date:	**02/13/2022**	Boring Depth (in):	**32**
Drilling End Date:	**02/13/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT, Core Barrel**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**740.78**
Logged By:	**D. Kegley**	Location (N,E):	**1237995.22, 2027139.68**

DEPTH (FT)	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
0	SS	4 6 7 6	1.8	13	(0') SANDY CLAY (CL); reddish-brown, medium stiff, medium plasticity, trace gravel.	740
5	SS	3 3 2 3	1.1	5	(4') SANDY CLAY (CL); reddish-brown, moist, soft, medium plasticity, trace gravel.	735
	ST		2		(6') Not logged - Shelby tube sample collected.	
10	SS	3 5 7 14	1.5	12	(8') SANDY CLAY (CL); reddish-brown to gray, medium stiff, medium plasticity, trace gravel.	730
	SS	50/3	0.25	>50	(12') RESIDUAL SOIL/SAPROLITE; rock fragments (schist).	
15	CB		0.75	42	(16') GNEISS; banded, fractures along foliation planes at 16'3 and 16'4, trace iron oxide staining.	725
20	CB		4.33	62	(17') GNEISS; banded, fractures along foliation planes at 17'3, 17'7, 17'9, 18' 4.5, 19', 19'3, 20'3, trace iron oxide staining.	

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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Drilling Start Date:	**02/13/2022**	Boring Depth (in):	**32**
Drilling End Date:	**02/13/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT, Core Barrel**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**740.78**
Logged By:	**D. Kegley**	Location (N,E):	**1237995.22, 2027139.68**

DEPTH (FT)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
20				CB		5	95	(17') GNEISS; banded, fractures along foliation planes at 17'3, 17'7, 17'9, 18' 4.5, 19', 19'3, 20'3, trace iron oxide staining. *(continued)*	720
25				CB				(22') GNEISS; banded, fractures along foliation planes at 23' 2, 24' 2, 26'9, trace iron oxide staining.	715
30				CB		5	94	(27') GNEISS; banded, fractures along foliation planes at 28' 6.5, 28'1, 28'11, 30'7, trace iron oxide staining.	710

(32') Boring terminated.

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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Drilling Start Date:	**12/18/2021**	Boring Depth (in):	**4**
Drilling End Date:	**12/18/2021**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**843.77**
Logged By:	**D. Kegley**	Location (N,E):	**1238291.65, 2025182.74**

DEPTH (FT)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
0				SS	3 7 18 50/5	2	25	(0') SAND (SP); yellowish-brown, moist, poorly graded, trace organics.	
				SS	50/4	0	>50	(2') ROCK; No recovery. Switched to carbon tipped drill bit.	840

(4') Boring terminated.

NOTES:

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Drilling Start Date:	**01/19/2022**	Boring Depth (in):	**52.5**
Drilling End Date:	**01/21/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**762.85**
Logged By:	**D. Kegley**	Location (N,E):	**1239184.73, 2026897.73**

DEPTH (FT)	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
0	SS	1 2 3 4	1.2	5	(0') CLAY (CL); reddish-brown, soft, medium plasticity, trace gravel, trace organics.	
						760
5	SS	5 5 10 14	1.5	15	(4') RESIDUAL SOIL/SAPROLITE; mica, relict rock structures, texture of silty sand to sandy clay (SM-CL), reddish-brown.	
	ST		0.8		(6') Not logged - Shelby tube sample collected.	
						755
10	SS	6 10 12 17	1.4	22	(8') RESIDUAL SOIL/SAPROLITE; mica, relict rock structures, texture of silty sand to sandy clay (SM-CL), reddish-brown.	
	SS	5 6 11 16	1.9	17	(12') RESIDUAL SOIL/SAPROLITE; mica, relict rock structures, texture of sandy clay (CL), reddish-brown.	750
15	SS	7 14 18 22	1.7	32	(16') RESIDUAL SOIL/SAPROLITE; mica, relict rock structures, texture of sandy clay (CL), reddish-brown.	
						745
20						

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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Address: 1371 Liberty Church Rd, Carrollton, GA

BORING LOG
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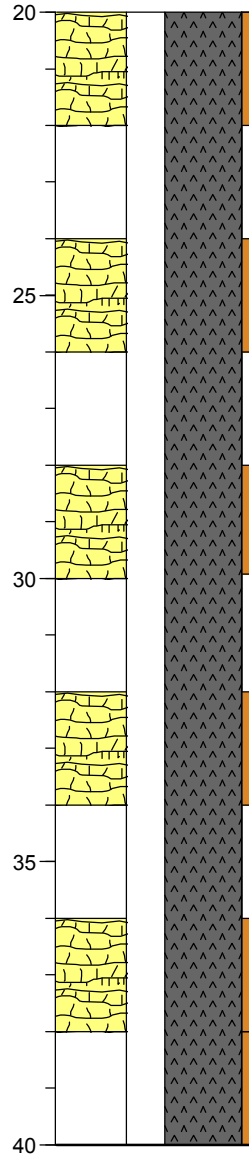
Drilling Start Date:	**01/19/2022**	Boring Depth (in):	**52.5**
Drilling End Date:	**01/21/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**762.85**
Logged By:	**D. Kegley**	Location (N,E):	**1239184.73, 2026897.73**



DEPTH (FT)	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
20	SS	10 12 18 22	1.7	30	(20') RESIDUAL SOIL/SAPROLITE; mica with trace rock fragments, relict rock structure, texture of silty sand to sandy clay (SM-CL).	
						740
25	SS	14 21 30 36	1.7	>50	(24') RESIDUAL SOIL/SAPROLITE; mica with trace rock fragments, relict rock structure, texture of silty sand to sandy clay (SM-CL).	
						735
30	SS	12 26 34 50/5	1.5	>50	(28') RESIDUAL SOIL/SAPROLITE; some relict rock structure.	
	SS	10 16 26 27	1.5	42	(32') RESIDUAL SOIL/SAPROLITE; some relict rock structure.	
						730
35	SS	2 2 3 7	2	5	(36') RESIDUAL SOIL/SAPROLITE; relict rock structure, texture of sandy clay (CL), soft, medium plasticity.	
						725
	ST		1.3		(38') Not logged - Shelby tube sample collected.	
40						

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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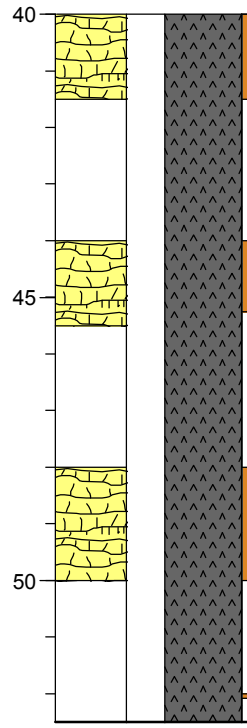
Drilling Start Date:	**01/19/2022**	Boring Depth (in):	**52.5**
Drilling End Date:	**01/21/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**762.85**
Logged By:	**D. Kegley**	Location (N,E):	**1239184.73, 2026897.73**



DEPTH (FT)	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
40	SS	20 46 50/6	1.3	>50	(40') RESIDUAL SOIL/SAPROLITE; yellowish-brown to white, few relict rock structures texture of medium to coarse sand.	
						720
45	SS	36 38 50/3	1.4	>50	(44') PARTIALLY WEATHERED ROCK (PWR); yellowish-brown to white, few relict rock structures texture of medium to coarse sand.	
						715
50	SS	30 36 33 22	1.5	>50	(48') PWR; yellowish-brown to white, few relict rock structures texture of medium to coarse sand.	
	SS	50/1	0	>50	(51.5') Top of rock. Drill rig chattering.	
					(52.5') Boring terminated - refusal.	

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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Drilling Start Date:	**01/23/2022**	Boring Depth (in):	**14**
Drilling End Date:	**01/23/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**748.72**
Logged By:	**D. Kegley**	Location (N,E):	**1238902.43, 2027022.52**

DEPTH (FT)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
0				SS	2 3 3 3	1.8	6	(0') CLAY (CL); reddish-brown, soft, medium plasticity, trace sand, some organics.	
									745
5				SS	1 1 1 1	0.9	2	(4') SANDY CLAY (CL); grayish brown, wet, very soft, low plasticity, some organics.	
				SS	14 11 21 46	1.7	32	(6') RESIDUAL SOIL/SAPROLITE; (SM); some rock fragments, relict rock structure (schist), texture of silty sand (SM).	
									740
10				SS	10 17 14 50/2	1.2	31	(10') RESIDUAL SOIL/SAPROLITE; (SM); some rock fragments, relict rock structure (saprolite from a schist to a gneiss), texture of silty sand (SM).	
								(12.5') SCHIST.	735

(14') Boring terminated.

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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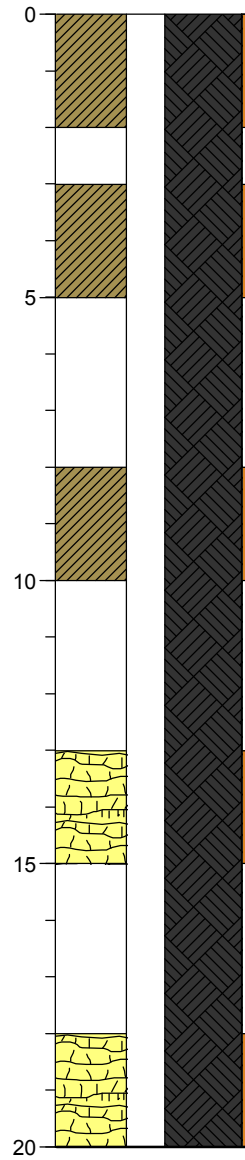
Drilling Start Date:	**02/15/2022**	Boring Depth (in):	**49**
Drilling End Date:	**02/15/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**749.51**
Logged By:	**D. Kegley**	Location (N,E):	**1239385.49, 2027706.4**



Depth (FT)	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	Elevation (FT NAVD 88)
0	SS	1, 2, 2, 1	0.75	4	(0') CLAY (CL); reddish-brown, very soft, medium plasticity, trace sand.	
5	SS	5, 4, 7, 8	1.7	11	(3') CLAY (CL); reddish-brown, medium stiff, medium plasticity, some gravel and trace sand.	745
10	SS	12, 9, 6, 7	0.8	15	(8') SANDY CLAY (CL); reddish-brown, moist, micaceous with trace gravel/rock fragments.	740
15	SS	5, 6, 20, 21	1.5	26	(13') RESIDUAL SOIL/SAPROLITE; trace rock fragments, relict rock structure (schist), texture of sandy clay (CL).	735
20	SS	35, 33, 29, 22	1.4	>50	(18') RESIDUAL SOIL/SAPROLITE; micaceous with trace rock fragments, increased relict rock structure (schist), texture of silty sand (SM).	730

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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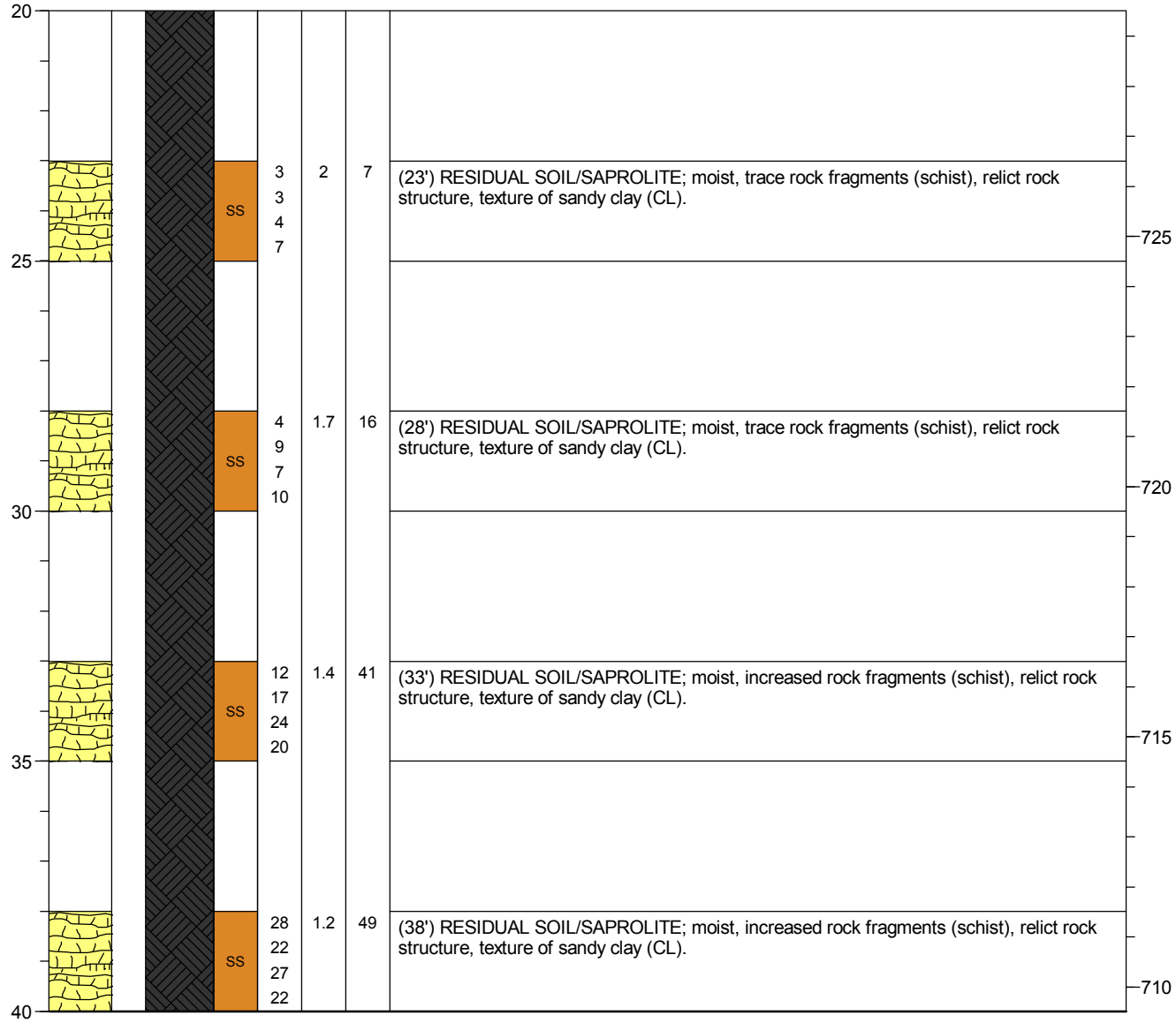
Drilling Start Date:	**02/15/2022**	Boring Depth (in):	**49**
Drilling End Date:	**02/15/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**749.51**
Logged By:	**D. Kegley**	Location (N,E):	**1239385.49, 2027706.4**



NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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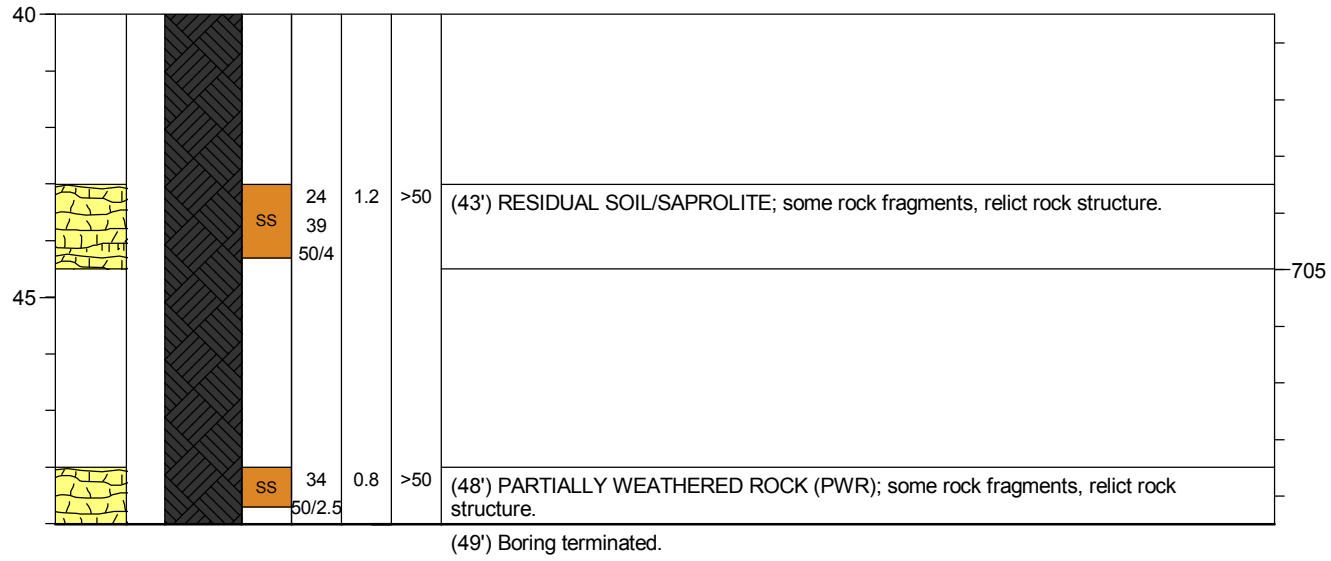
Drilling Start Date:	**02/15/2022**	Boring Depth (in):	**49**
Drilling End Date:	**02/15/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**749.51**
Logged By:	**D. Kegley**	Location (N,E):	**1239385.49, 2027706.4**



DEPTH (FT)	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
40						
	SS	24 39 50/4	1.2	>50	(43') RESIDUAL SOIL/SAPROLITE; some rock fragments, relict rock structure.	
45						705
	SS	34 50/2.5	0.8	>50	(48') PARTIALLY WEATHERED ROCK (PWR); some rock fragments, relict rock structure.	
					(49') Boring terminated.	

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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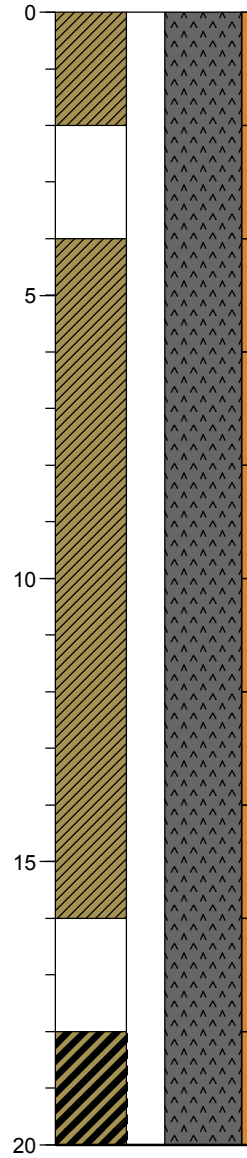
Drilling Start Date:	**12/19/2021**	Boring Depth (in):	**48**
Drilling End Date:	**12/20/2021**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**773.49**
Logged By:	**D. Kegley**	Location (N,E):	**1237517.37, 2026560.25**



DEPTH (FT)	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
0	SS	7 5 6 7	1.7	11	(0') SANDY CLAY (CL); reddish-brown, medium stiff, medium plasticity, some gravel, dike material.	
	SS	5 6 8 8	0	14	(2') No recovery.	770
5	SS	3 4 6 6	1.5	10	(4') SANDY CLAY (CL); reddish-brown, medium stiff, medium plasticity, some gravel, dike material.	
	SS	2 2 2 4	1.3	4	(6') Same as above.	
	SS	4 6 5 7	1	11	(8') Same as above.	765
10	SS	4 4 4 6	1.5	8	(10') Same as above.	
	SS	3 2 2 3	1	4	(12') Same as above.	
	SS	2 3 2 2	0.5	5	(14') Same as above.	760
15	ST		0.5		(16') Not logged - Shelby tube sample collected.	
	SS	2 2 2 4	0.8	4	(18') SANDY CLAY (SC); reddish-brown, very soft, high plasticity, some gravel.	755
20						

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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Drilling Start Date:	**12/19/2021**	Boring Depth (in):	**48**
Drilling End Date:	**12/20/2021**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**773.49**
Logged By:	**D. Kegley**	Location (N,E):	**1237517.37, 2026560.25**

DEPTH (FT)	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
20	SS	7 6 6 7	1.8	12	(18') SANDY CLAY (SC); reddish-brown, medium stiff, high plasticity, some gravel.*(continued)*	
					(20') Same as above.	
					(21') LEAN CLAY (CL); yellowish-brown, stiff, medium plasticity, trace gravel and sand.	
	ST		2		(22') Not logged - Shelby tube sample collected.	750
25	SS	3 2 3 5	1.8	5	(24') SANDY CLAY (CL); reddish-brown, soft, medium plasticity, trace gravel.	
	SS	4 4 5 7	1.8	9	(26') Low plasticity, increasing sand content.	
	SS	6 14 21 22	1.7	35	(28') SAPROLITE; mica with trace schist fragments, relict rock structure.	745
30	SS	7 8 8 11	1.7	16	(30') Fragments of quartz and feldspar.	
	SS	20 41 24 10	1	>50	(32') SCHIST; some quartz and feldspar.	740
	SS	16 19 11 15	1	30	(34') RESIDUAL SOIL/SAPROLITE; saprolite and schist rock fragments.	
35	SS	14 12 15 22	1.5	27	(36') Same as above.	
	SS	18 21 34 32	1.5	>50	(38') Same as above.	735
40						

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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Drilling Start Date:	**12/19/2021**	Boring Depth (in):	**48**
Drilling End Date:	**12/20/2021**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**773.49**
Logged By:	**D. Kegley**	Location (N,E):	**1237517.37, 2026560.25**

DEPTH (FT)	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
40	SS	10 7 9 14	1.7	16	(34') RESIDUAL SOIL/SAPROLITE; saprolite and schist rock fragments. *(continued)* (40') Same as above.	
	SS	14 24 16 14	1.5	40	(42') Same as above.	730
45	SS	19 14 17 50/6	1.5	31	(44') Same as above.	
	SS	15 18 20 50/1	1.5	38	(46') PARTIALLY WEATHERED ROCK (PWR); rock fragments in shoe.	

(48') Boring terminated - refusal.

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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Drilling Start Date:	**01/04/2022**	Boring Depth (in):	**25.5**
Drilling End Date:	**01/04/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**798.37**
Logged By:	**D. Kegley**	Location (N,E):	**1237119.34, 2027195.35**

DEPTH (FT)	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
0	SS	8 5 5 8	1.5	10	(0') LEAN CLAY (CL); reddish-brown, medium stiff, medium plasticity, some gravel with trace silt.	
	SS	4 5 8 11	1.5	13	(2') Same as above.	795
5	SS	4 7 8 14	1.1	15	(4') SANDY CLAY (CL); reddish-brown, medium stiff, medium plasticity, trace gravel.	
	SS	4 5 6 8	1.3	11	(6') Same as above.	
	ST		1		(8') Not logged - Shelby tube sample collected.	790
10	SS	5 5 6 9	1.3	11	(10') SANDY CLAY (CL); reddish-brown to black, medium stiff, medium plasticity, some gravel.	
	SS	6 6 8 4	1.2	14	(12') Same as above.	785
15	SS	4 5 7 9	1.7	12	(14') Same as above.	
	SS	3 4 6 9	1.6	10	(16') SANDY CLAY (SC); reddish-brown, medium stiff, medium plasticity, some gravel.	
	ST		1.8		(18') Not logged - Shelby tube sample collected.	780
20						

NOTES:

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Drilling Start Date:	**01/04/2022**	Boring Depth (in):	**25.5**
Drilling End Date:	**01/04/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**798.37**
Logged By:	**D. Kegley**	Location (N,E):	**1237119.34, 2027195.35**

DEPTH (FT)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
20				SS	2 2 4 6	1.7	6	(20') SANDY CLAY (CL); reddish-brown, soft, medium plasticity, some gravel.	
				SS	3 3 10 26	1.9	13	(22') Same as above.	
								(23.5') PARTIALLY WEATHERED ROCK (PWR); rock fragments.	775
				SS	6 27	1	>50	(24') Same as above.	
25				SS	50/3	0	>50		

(25.5') Boring terminated - refusal. Top of rock.

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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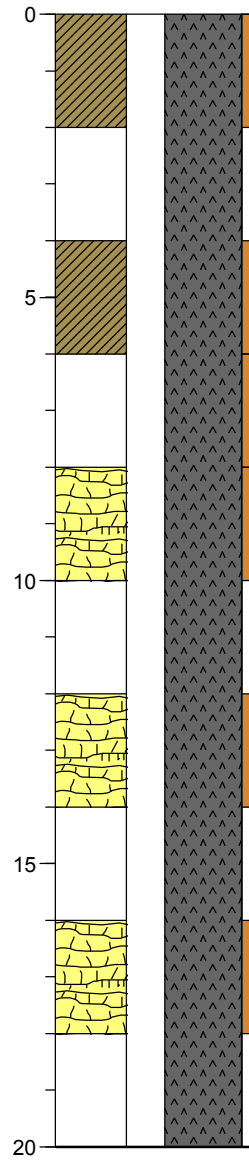
Drilling Start Date:	**01/09/2022**	Boring Depth (in):	**63**
Drilling End Date:	**01/09/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**731.15**
Logged By:	**D. Kegley**	Location (N,E):	**1238263.98, 2029556.4**



DEPTH (FT)	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
0	SS	4 5 5 4	1.5	10	(0') LEAN CLAY (CL); reddish-brown, medium stiff, medium plasticity, trace gravel and sand.	730
5	SS	2 2 2 4	1	4	(4') SANDY CLAY (CL); reddish-brown, soft, medium plasticity, trace gravel, some organics (wood).	
	ST		1.4		(6') Not logged - Shelby tube sample collected.	725
	SS	7 8 7 12	1.6	15	(8') SAPROLITE; mica, relict rock structures, texture of sandy clay (CL), reddish-brown to black, medium stiff, medium plasticity.	
10						720
	SS	14 18 22 29	1.1	40	(12') SAPROLITE; mica, more relict rock structures, texture of sandy clay (CL), reddish-brown to black, very stiff, low plasticity.	
15	SS	10 14 16 20	1.3	30	(16') SAPROLITE; mica and trace rock fragments, more relict rock structures, texture of sandy clay (CL), reddish-brown to black, stiff, medium plasticity.	715
20						

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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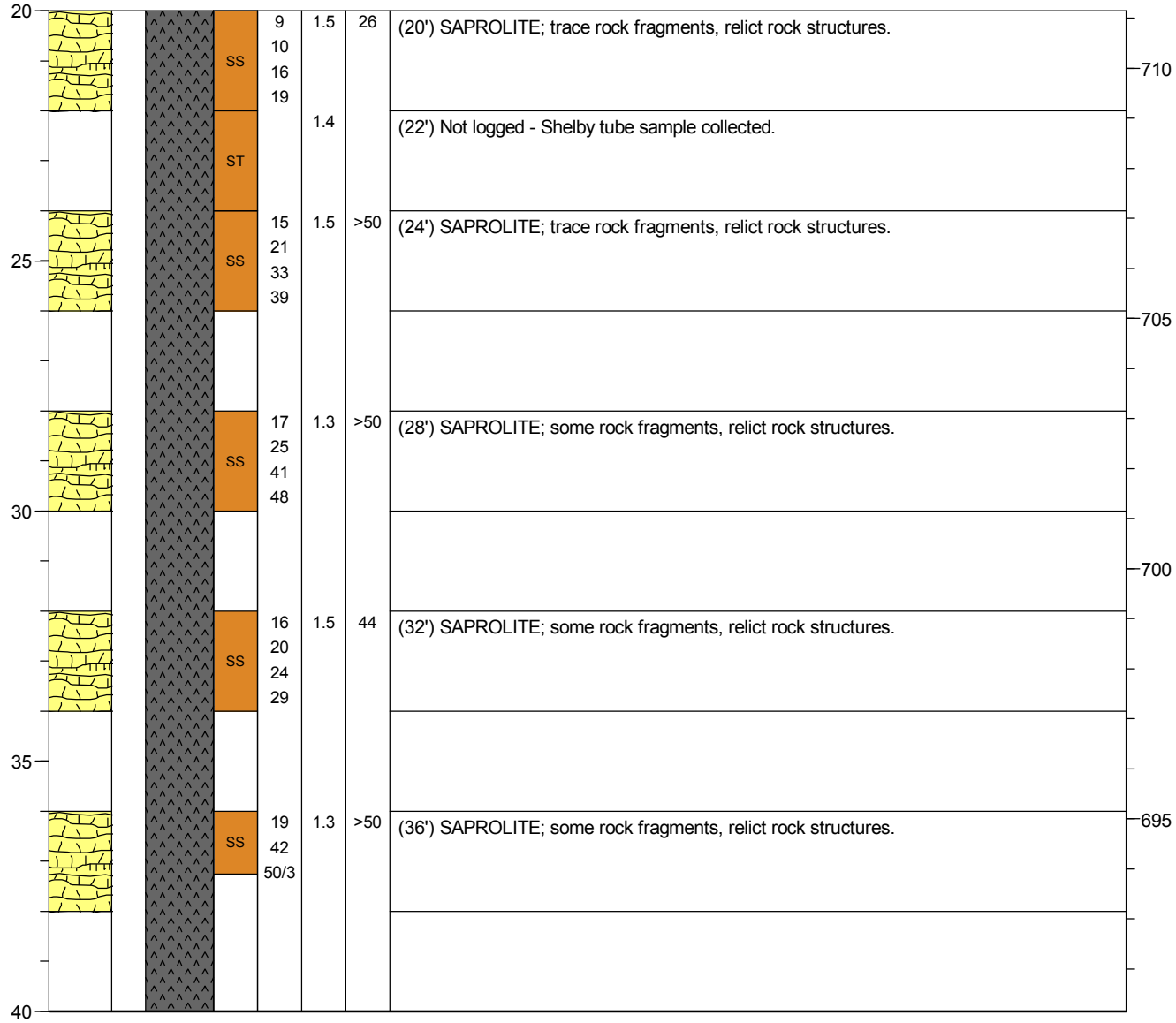
Drilling Start Date:	**01/09/2022**	Boring Depth (in):	**63**
Drilling End Date:	**01/09/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**731.15**
Logged By:	**D. Kegley**	Location (N,E):	**1238263.98, 2029556.4**



NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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Address: 1371 Liberty Church Rd, Carrollton, GA

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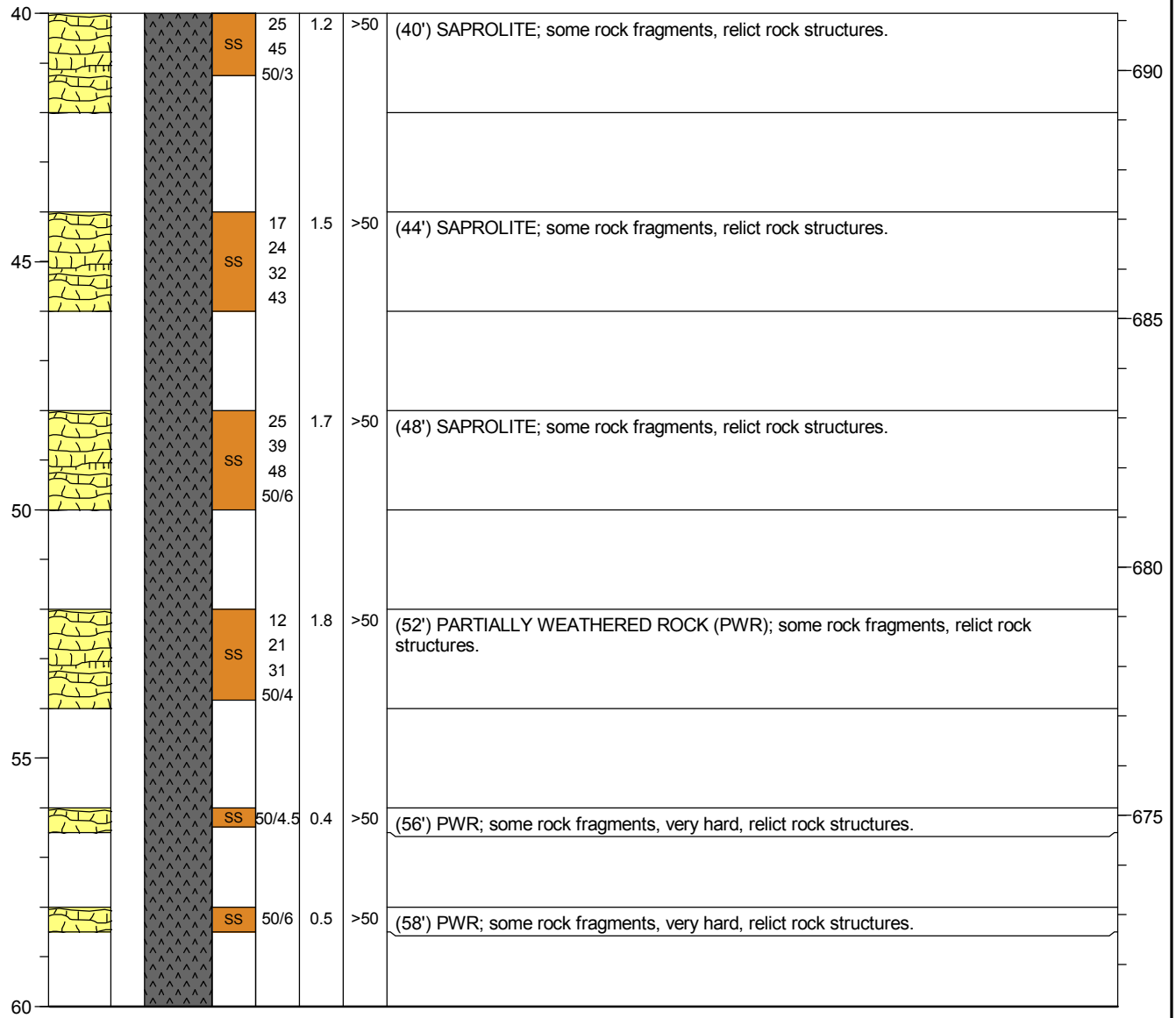
Drilling Start Date:	**01/09/2022**	Boring Depth (in):	**63**
Drilling End Date:	**01/09/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**731.15**
Logged By:	**D. Kegley**	Location (N,E):	**1238263.98, 2029556.4**



NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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Drilling Start Date:	**01/09/2022**	Boring Depth (in):	**63**
Drilling End Date:	**01/09/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**731.15**
Logged By:	**D. Kegley**	Location (N,E):	**1238263.98, 2029556.4**

DEPTH (FT)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
60				SS	28 50/2	0	>50	(62') PWR; some rock fragments, very hard, relict rock structures.	670

(63') Boring terminated - top of rock.

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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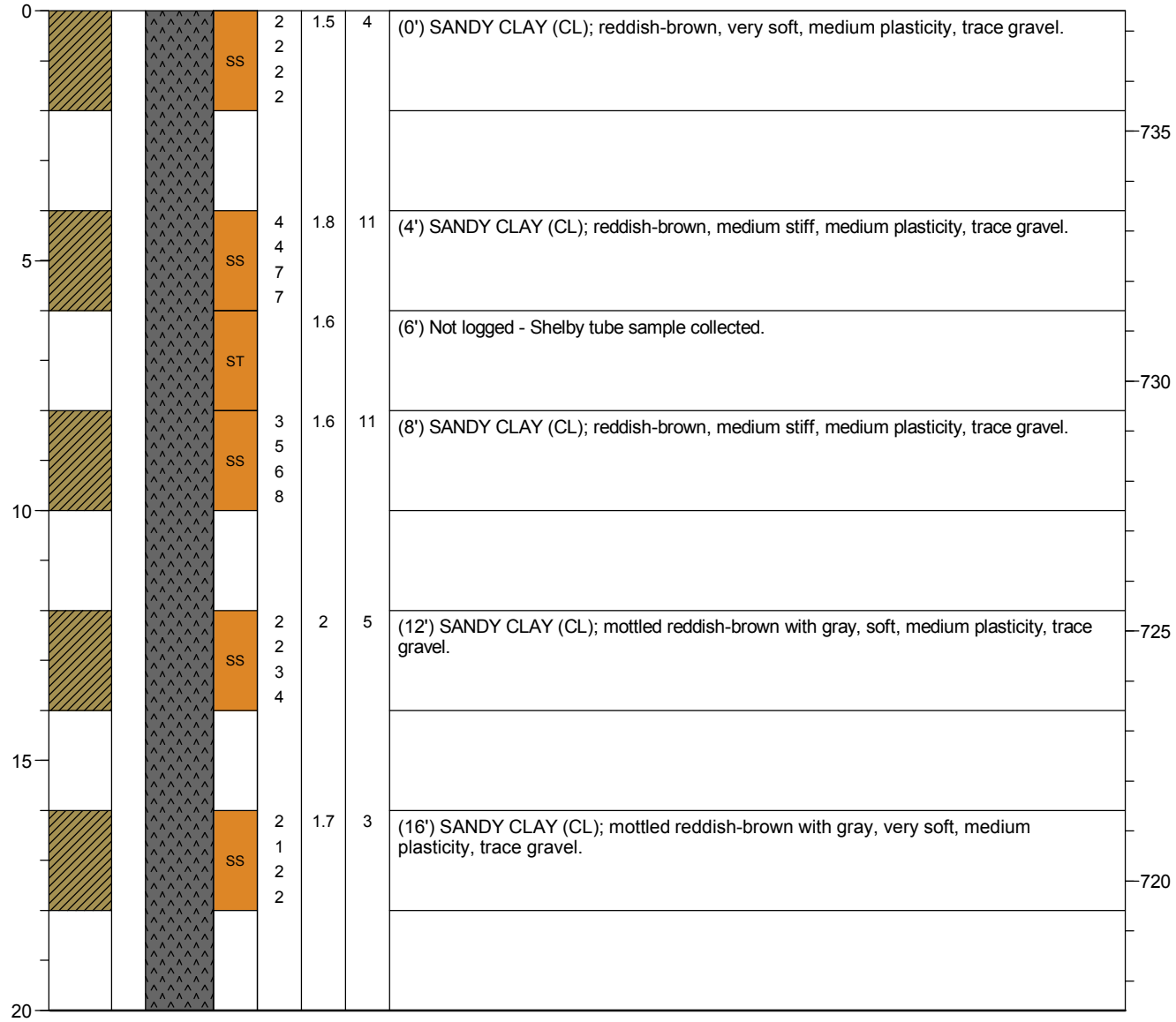
Drilling Start Date:	**01/05/2022**	Boring Depth (in):	**61**
Drilling End Date:	**01/05/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**737.41**
Logged By:	**D. Kegley**	Location (N,E):	**1236324.83, 2028421.85**



NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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Drilling Start Date:	**01/05/2022**	Boring Depth (in):	**61**
Drilling End Date:	**01/05/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**737.41**
Logged By:	**D. Kegley**	Location (N,E):	**1236324.83, 2028421.85**

DEPTH (FT)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
20				SS	2 1 3 2	1.8	4	(20') SANDY CLAY (CL); mottled reddish-brown with gray, very soft, medium plasticity, trace gravel.	
				ST		2		(22') Not logged - Shelby tube sample collected.	715
25				SS	1 2 3 4	2	5	(24') SANDY CLAY (CL); reddish-brown, soft, medium plasticity, trace gravel.	
									710
30				SS	2 4 6 7	1.9	10	(28') SANDY CLAY (CL); reddish-brown, medium stiff, medium plasticity, trace gravel.	
				SS	2 1 2 5	1.9	3	(32') SANDY CLAY (CL); reddish-brown, very soft, medium plasticity, trace gravel.	705
35				SS	2 4 5 9	2	9	(36') SAPROLITE; relict rock structure, sandy clay like texture.	700
40									

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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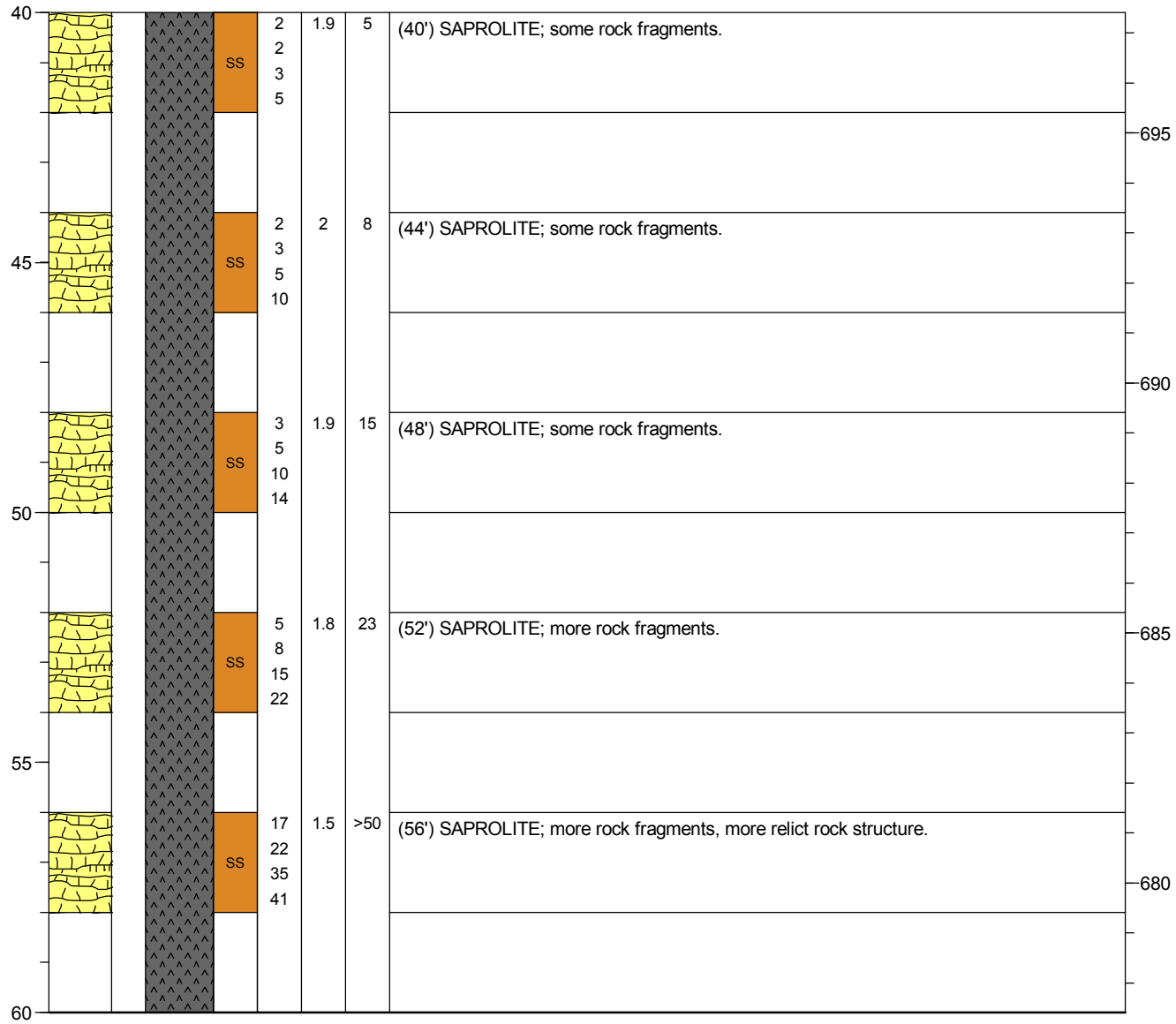
Drilling Start Date:	**01/05/2022**	Boring Depth (in):	**61**
Drilling End Date:	**01/05/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**737.41**
Logged By:	**D. Kegley**	Location (N,E):	**1236324.83, 2028421.85**



NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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Drilling Start Date:	**01/05/2022**	Boring Depth (in):	**61**
Drilling End Date:	**01/05/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**737.41**
Logged By:	**D. Kegley**	Location (N,E):	**1236324.83, 2028421.85**

DEPTH (FT)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
60				SS	31 50/6	1	>50	(60') SAPROLITE; more rock fragments, more relict rock structure, rock fragments in bottom of spoon.	
								(61') Boring terminated - refusal. Top of rock.	

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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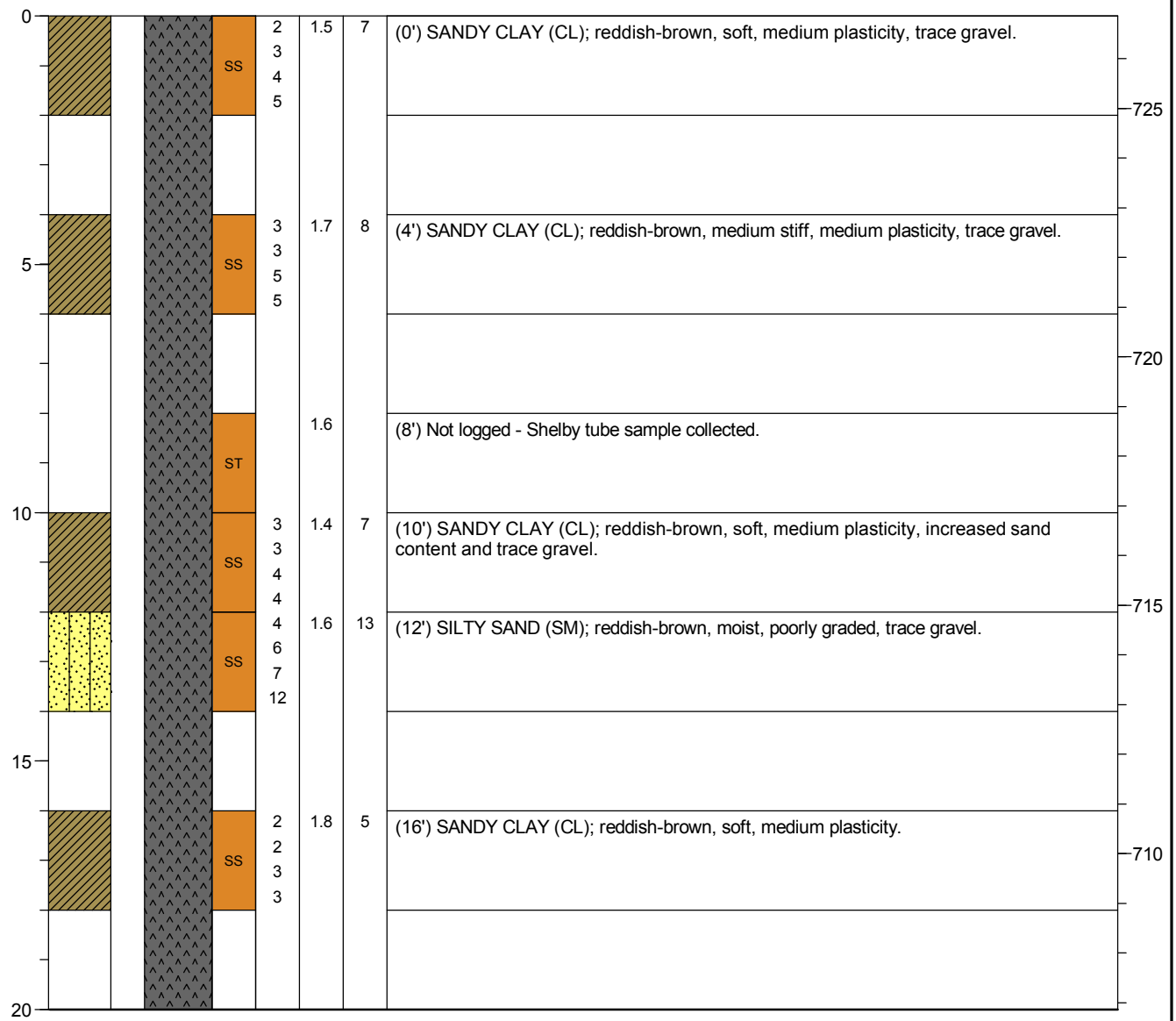
Drilling Start Date:	**01/06/2022**	Boring Depth (in):	**44**
Drilling End Date:	**01/06/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**726.86**
Logged By:	**D. Kegley**	Location (N,E):	**1236448, 2028775.97**



NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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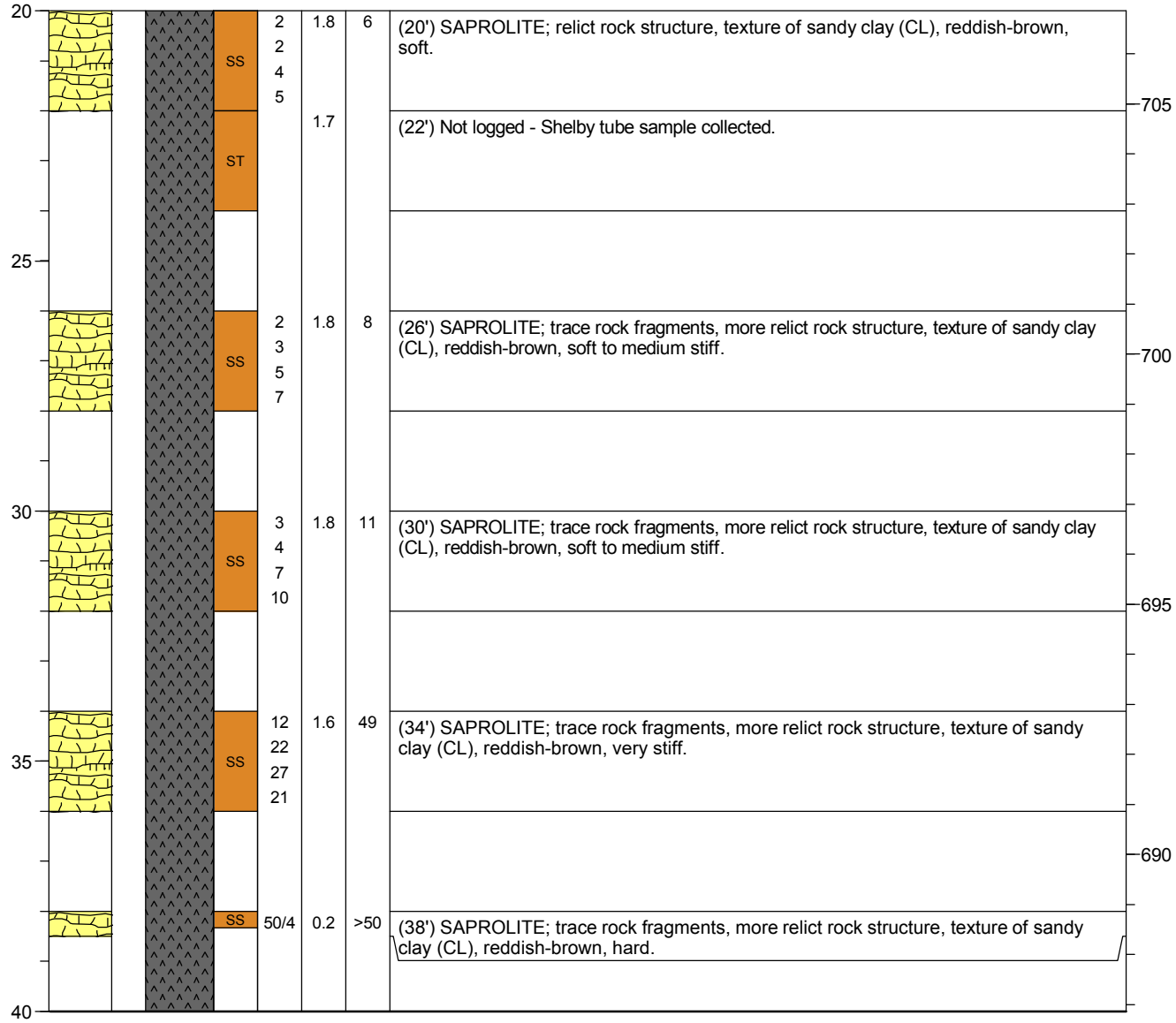
Drilling Start Date:	**01/06/2022**	Boring Depth (in):	**44**
Drilling End Date:	**01/06/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**726.86**
Logged By:	**D. Kegley**	Location (N,E):	**1236448, 2028775.97**



NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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Drilling Start Date:	**01/06/2022**	Boring Depth (in):	**44**
Drilling End Date:	**01/06/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**726.86**
Logged By:	**D. Kegley**	Location (N,E):	**1236448, 2028775.97**

DEPTH (FT)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
40				SS	17 30 45 50/1	1.4	>50	(42') PARTIALLY WEATHERED ROCK (PWR); trace rock fragments, more relict rock structure, texture of sandy clay (CL), reddish-brown, hard.	685

(44') Boring terminated - refusal. Top of rock.

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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Drilling Start Date:	**02/18/2022**	Boring Depth (in):	**32**
Drilling End Date:	**02/18/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**716.02**
Logged By:	**D. Kegley**	Location (N,E):	**1236256.81, 2029170.14**

DEPTH (FT)	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
0	SS	2 3 4 6	1.7	7	(0') SANDY CLAY (CL); reddish-brown, soft, low plasticity, trace gravel.	715
5	SS	2 2 4 4	1.5	6	(4') RESIDUAL SOIL/SAPROLITE; moist, trace relict rock structure (schist), texture of sandy clay (CL).	710
	ST		2		(6') Not logged - Shelby tube sample collected.	
10	SS	1 2 2 4	1.7	4	(8') RESIDUAL SOIL/SAPROLITE; moist, increased relict rock structure (schist), texture of sandy clay (CL).	705
	SS	2 2 2 4	1.9	4	(12') RESIDUAL SOIL/SAPROLITE; moist, increased relict rock structure (schist), texture of sandy clay (CL).	
15	SS	2 2 2 4	1.9	4	(16') RESIDUAL SOIL/SAPROLITE; moist, trace rock fragments, increased relict rock structure (schist), texture of sandy clay (CL).	700
	ST		2		(18') Not logged - Shelby tube sample collected.	
20						

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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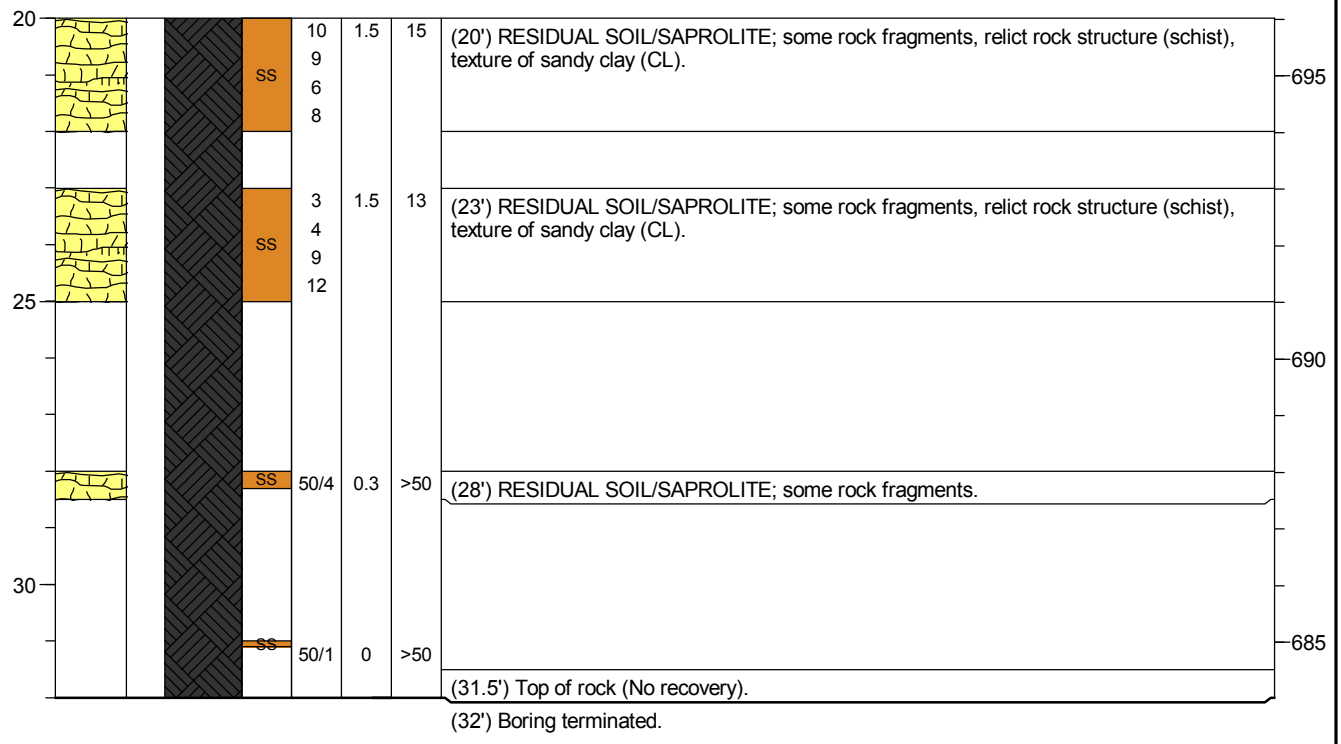
Drilling Start Date:	**02/18/2022**	Boring Depth (in):	**32**
Drilling End Date:	**02/18/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**716.02**
Logged By:	**D. Kegley**	Location (N,E):	**1236256.81, 2029170.14**



NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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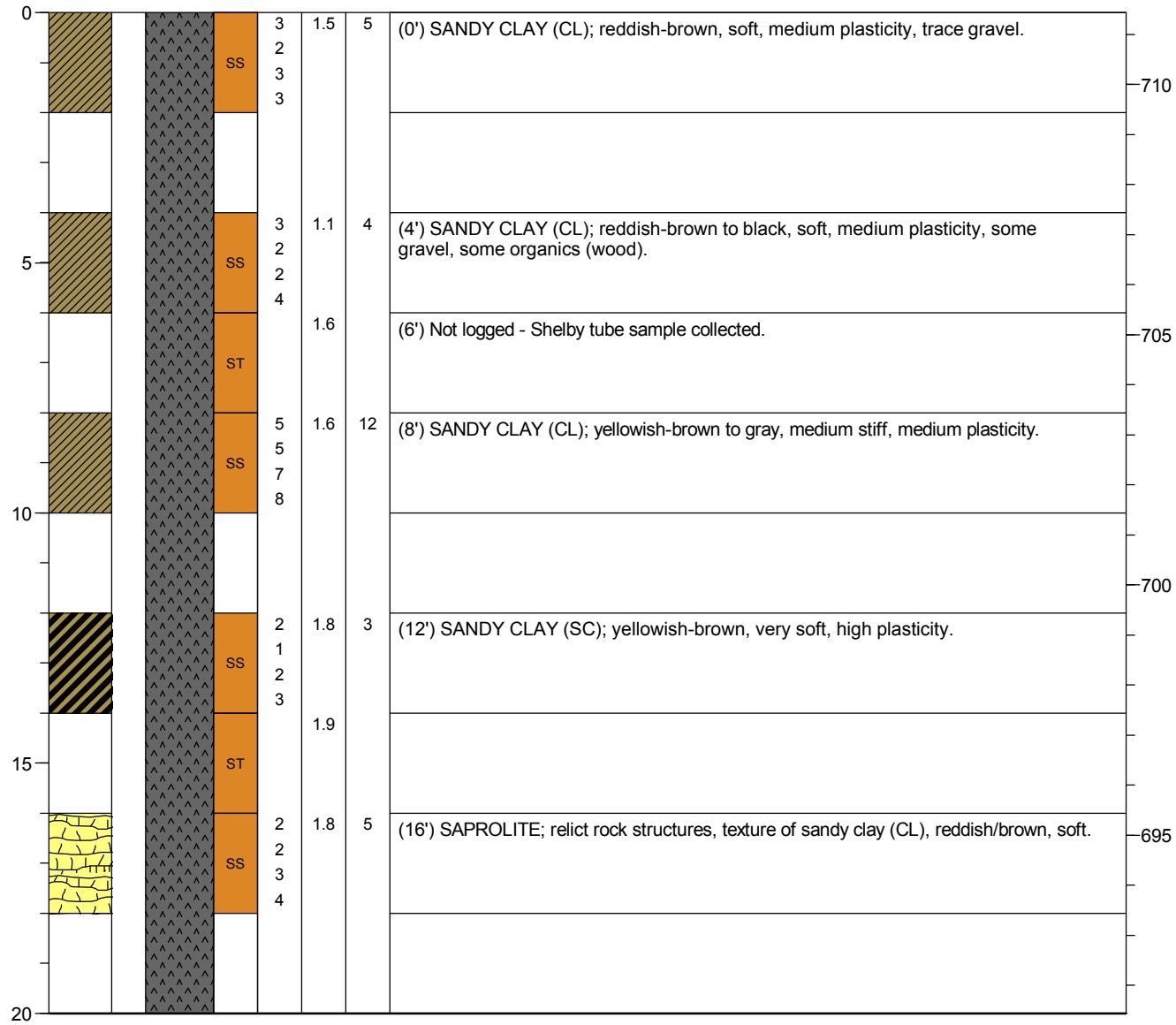
Drilling Start Date:	**01/07/2022**	Boring Depth (in):	**48.5**
Drilling End Date:	**01/07/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**711.44**
Logged By:	**D. Kegley**	Location (N,E):	**1237037.05, 2029350.03**



NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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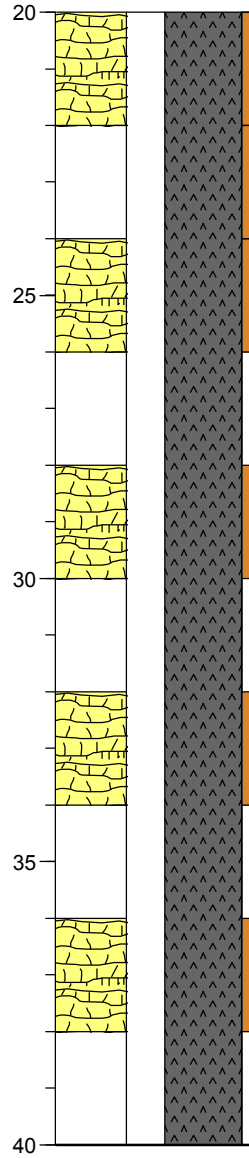
Drilling Start Date:	**01/07/2022**	Boring Depth (in):	**48.5**
Drilling End Date:	**01/07/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**711.44**
Logged By:	**D. Kegley**	Location (N,E):	**1237037.05, 2029350.03**



DEPTH (FT)	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
20	SS	1 1 2 3	1.9	3	(20') SAPROLITE; relict rock structures, texture of sandy clay (CL), reddish/brown, very soft.	690
	ST		1.7		(22') Not logged - Shelby tube sample collected.	
25	SS	2 2 3 4	2	5	(24') SAPROLITE; relict rock structures, texture of sandy clay (CL), soft.	685
30	SS	2 4 6 8	1.8	10	(28') SAPROLITE; increased rock fragments, relict rock structures, texture of sandy clay (CL), medium stiff.	680
35	SS	8 12 14 19	1.6	26	(32') SAPROLITE; increased rock fragments, relict rock structures, texture of sandy clay (CL), stiff.	675
40	SS	14 16 22 20	0.9	38	(36') SAPROLITE; increased rock fragments, relict rock structures, texture of sandy clay (CL), very stiff.	

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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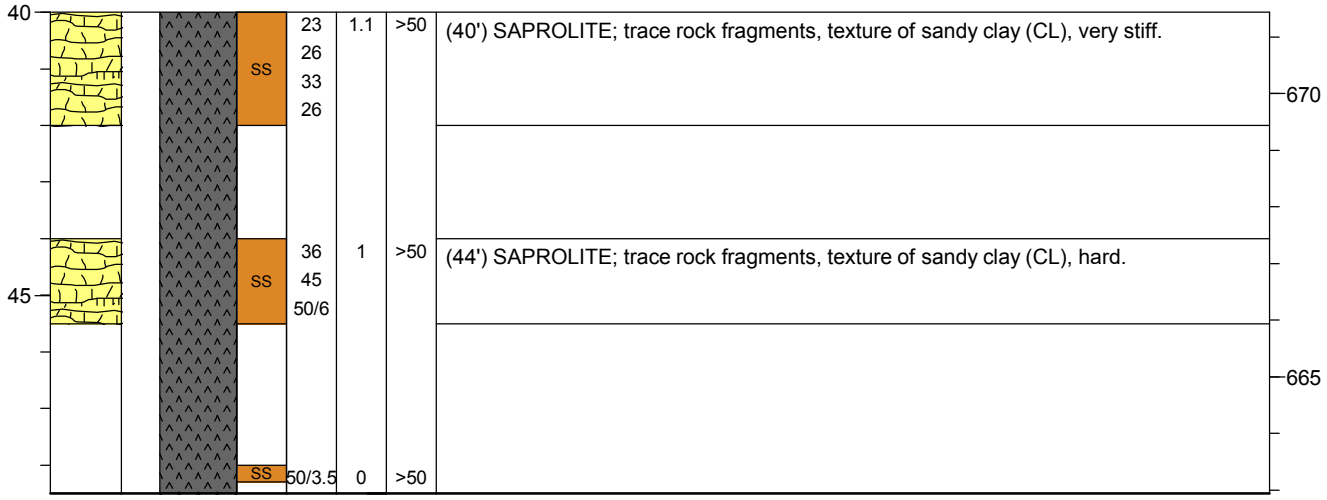
Drilling Start Date:	**01/07/2022**	Boring Depth (in):	**48.5**
Drilling End Date:	**01/07/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**711.44**
Logged By:	**D. Kegley**	Location (N,E):	**1237037.05, 2029350.03**



NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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Drilling Start Date:	**02/17/2022**	Boring Depth (in):	**34**
Drilling End Date:	**02/17/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**709.8**
Logged By:	**D. Kegley**	Location (N,E):	**1236725.26, 2029707.84**

DEPTH (FT)	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
0	SS	3 5 5 7	1.8	10	(0') CLAY (CL); reddish-brown, medium stiff, medium plasticity, trace sand.	
5	SS	3 4 6 7	1.5	10	(4') SANDY CLAY (CL); reddish-brown, moist, medium stiff, medium plasticity.	705
	ST		1.4		(6') Not logged - Shelby tube sample collected.	
10	SS	3 3 4 5	1.3	7	(8') RESIDUAL SOIL/SAPROLITE; relict rock structure (schist), texture of sandy clay (CL).	700
	SS	2 2 5 6	1.7	7	(12') RESIDUAL SOIL/SAPROLITE; relict rock structure (schist), texture of sandy clay (CL).	
15	SS	3 4 7 12	1.5	11	(16') RESIDUAL SOIL/SAPROLITE; increased sand content, increased relict rock structure (schist), texture of sandy clay (CL).	695
20						690

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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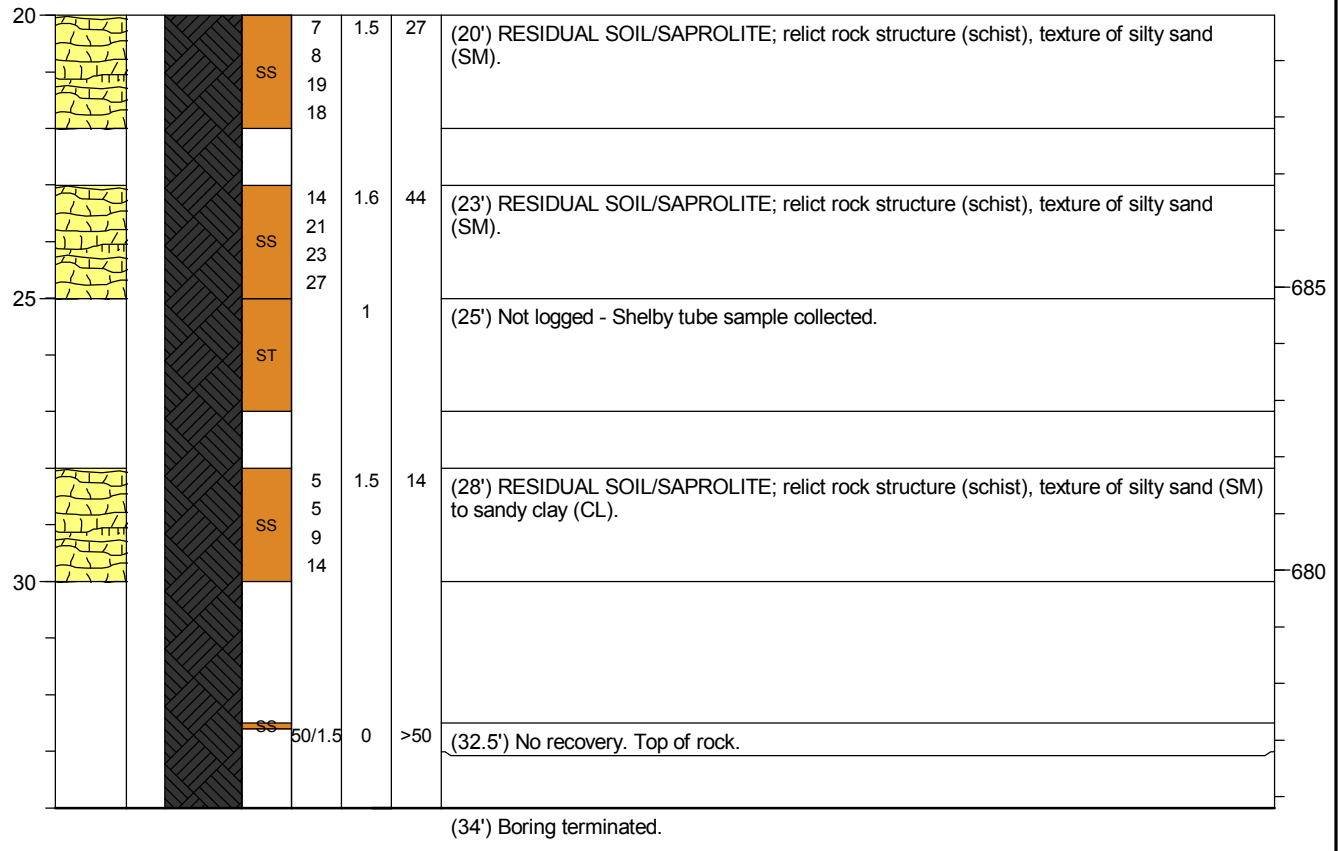
Drilling Start Date:	**02/17/2022**	Boring Depth (in):	**34**
Drilling End Date:	**02/17/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**709.8**
Logged By:	**D. Kegley**	Location (N,E):	**1236725.26, 2029707.84**



DEPTH (FT)	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
20	SS	7 8 19 18	1.5	27	(20') RESIDUAL SOIL/SAPROLITE; relict rock structure (schist), texture of silty sand (SM).	
	SS	14 21 23 27	1.6	44	(23') RESIDUAL SOIL/SAPROLITE; relict rock structure (schist), texture of silty sand (SM).	
25	ST		1		(25') Not logged - Shelby tube sample collected.	685
	SS	5 5 9 14	1.5	14	(28') RESIDUAL SOIL/SAPROLITE; relict rock structure (schist), texture of silty sand (SM) to sandy clay (CL).	
30	SS	50/1.5	0	>50	(32.5') No recovery. Top of rock.	680

(34') Boring terminated.

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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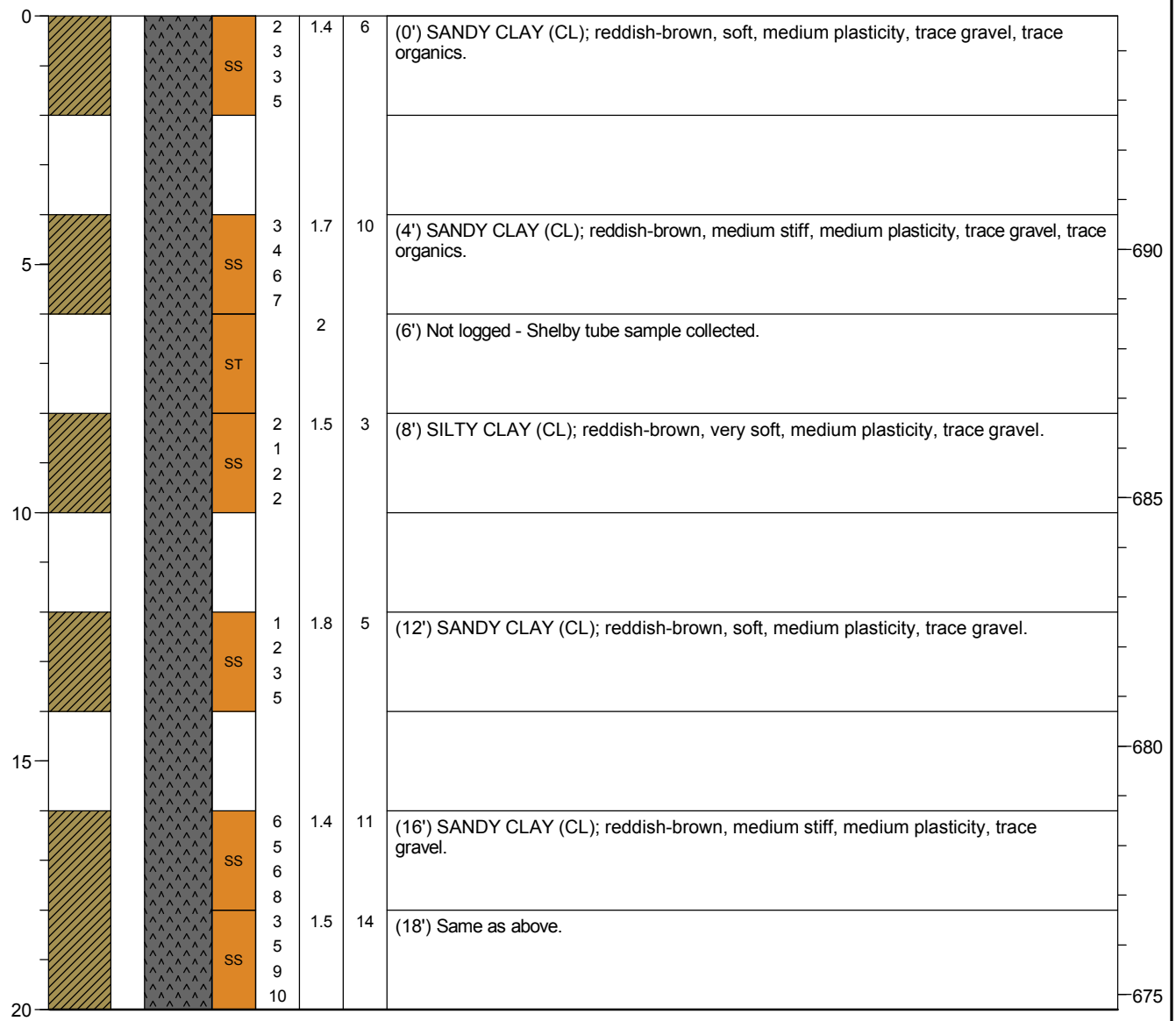
Drilling Start Date:	**01/08/2022**	Boring Depth (in):	**38.5**
Drilling End Date:	**01/08/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**694.7**
Logged By:	**D. Kegley**	Location (N,E):	**1237382.64, 2030010.11**



NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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Client: Southern Company Services
Project: Plant Wansley Landfill Expansion Investig.
Address: 1371 Liberty Church Rd, Carrollton, GA

BORING LOG
Boring No. GS-121
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Drilling Start Date:	**01/08/2022**	Boring Depth (in):	**38.5**
Drilling End Date:	**01/08/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**694.7**
Logged By:	**D. Kegley**	Location (N,E):	**1237382.64, 2030010.11**

DEPTH (FT)	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
20						
	SS	1 2 4 5	1.8	6	(22') SANDY CLAY (CL); reddish-brown, soft to medium stiff, medium plasticity, trace gravel.	
	ST		1		(24') Not logged - Shelby tube sample collected.	670
25	SS	12 12 14 16	1.4	26	(26') SAPROLITE; trace relict rock structures, texture of sandy clay (CL), stiff, medium plasticity.	
						665
30	SS	10 14 19 21	1.5	33	(30') SAPROLITE; relict rock structures, texture of sandy clay (CL), stiff, medium plasticity.	
	SS	14 25 32 50/5	1.8	>50	(34') SAPROLITE; some rock fragments, relict rock structures, texture of sandy clay (CL), very stiff, medium plasticity.	660
35	SS	50/6	0.2	>50	(38.5') Boring terminated - refusal. Top of rock. Saprolite (PWR), some rock fragments.	

NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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BORING LOG
Boring No. GS-122
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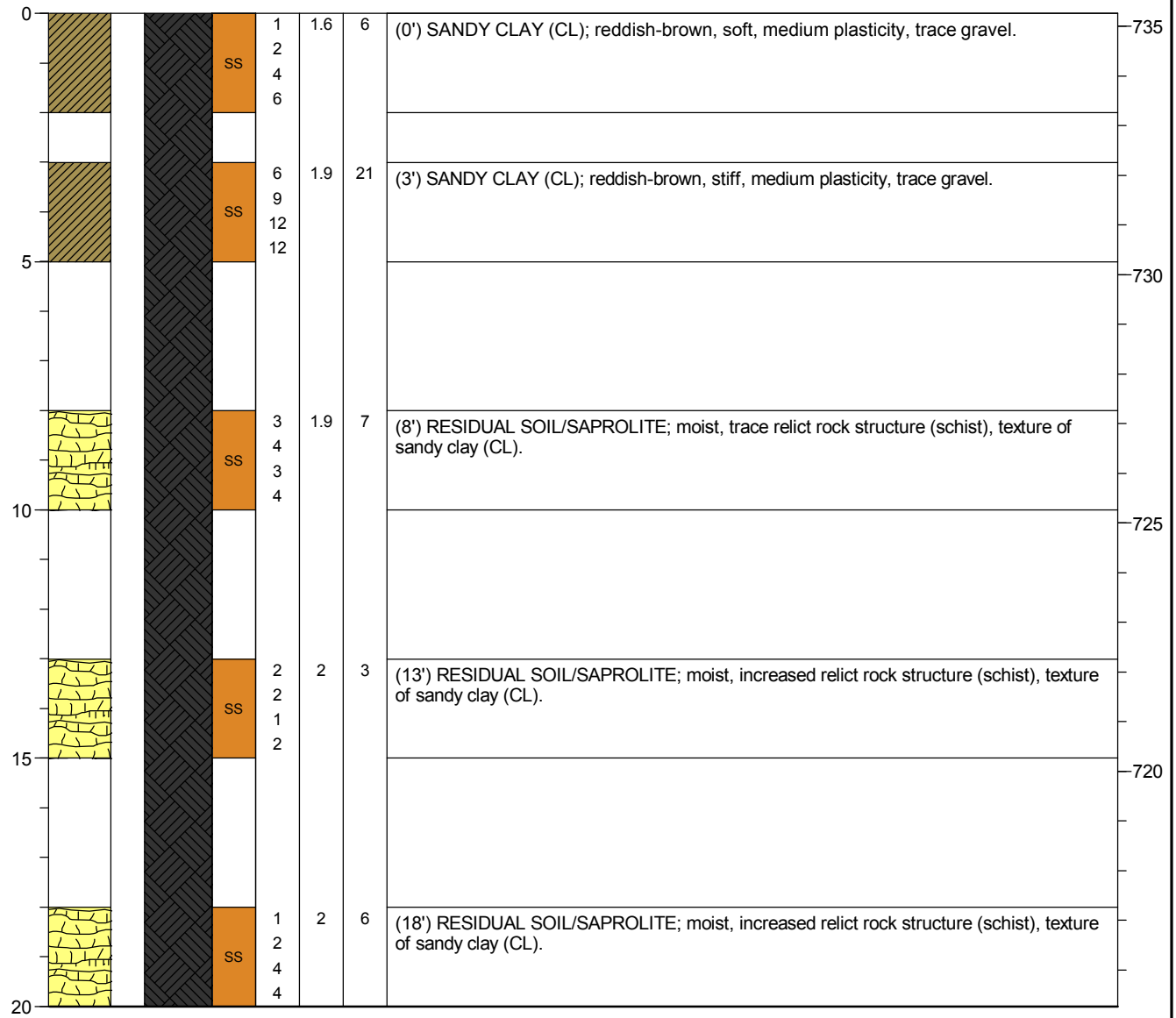
Drilling Start Date:	**01/08/2022**	Boring Depth (in):	**39**
Drilling End Date:	**01/08/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**735.26**
Logged By:	**D. Kegley**	Location (N,E):	**1239336.57, 2027990.34**



NOTES: Boring backfilled to ground surface with cement/bentonite grout.

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BORING LOG
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Drilling Start Date:	**01/08/2022**	Boring Depth (in):	**39**
Drilling End Date:	**01/08/2022**	Boring Diameter (in):	**3.8**
Drilling Company:	**Thompson Engineering**	Sampling Method(s):	**SPT**
Drilling Method:	**Mud Rotary**	DTW During Drilling (ft):	**NA**
Drilling Equipment:	**Dietrich D-50**	DTW After Drilling (ft):	**NA**
Driller:	**P. Pitts**	Ground Surface Elev. (ft NAVD 88):	**735.26**
Logged By:	**D. Kegley**	Location (N,E):	**1239336.57, 2027990.34**

DEPTH (FT)	Sample Type	Blow Counts	Recovery (ft)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	ELEVATION (FT NAVD 88)
20						715
	SS	1 1 1 1	1.5	2	(23') RESIDUAL SOIL/SAPROLITE; moist, trace rock fragments, relict rock structures (schist), texture of sandy clay (CL).	
25						710
	SS	2 3 3 2	2	6	(28') RESIDUAL SOIL/SAPROLITE; moist, trace rock fragments, relict rock structures (schist), texture of sandy clay (CL).	
30						705
	SS	2 4 4 4	2	8	(33') RESIDUAL SOIL/SAPROLITE; moist, trace rock fragments, relict rock structures (schist), texture of sandy clay (CL).	
35						700
	SS	50/4.5	0.3	>50	(38') PARTIALLY WEATHERED ROCK (PWR); rock fragments.	

(39') Boring terminated. Top of rock.

NOTES: Boring backfilled to ground surface with cement/bentonite grout.