



851 Aviation Parkway
Smyrna, TN 37167

Tennessee Wastewater Systems, Inc.
Docket 15-00025
February 2020 Report Overview

Systems subject to Notice of Violations and other Corrective Orders:

Summit View – Docket 14-00136 – TDEC has reinstated the construction plans for the site.

River Road* (NOV) – TWSI is awaiting a signed easement for the land occupied by the sewer system. This is the final requirement TDEC had for resolution of the NOV.

Hidden Springs Resort (Commissioner's Order) – Awaiting plans approval from TDEC. A petition has been filed and remains pending with the Commission seeking approval to spend funds from TWSI's escrow and reserve accounts for this project.

Cross Plains* (NOV) – TDEC issued a NOV for this facility on November 26, 2019. TWSI has conducted testing at the facility by a third party who has determined there is a two to three-foot-deep clay liner in the lagoon, and that the closest water well to the facility is a half mile away. TWSI has a soils scientist scheduled to come on site and conduct soils testing to determine the availability and usability of additional area soils for drip. TWSI is also working to bring power out to the building. TWSI continues to evaluate facility and will submit a plan to TDEC to address remaining concerns within the next 30-60 days.

* Neither system is not included in the KPI Report because there is no discharge from the facility.

Jeff Riden

From: HAWKMS Agent <agent@hawkms.com>
Sent: Saturday, February 1, 2020 8:01 AM
To: Jeff Riden; Matthew Nicks
Cc: Bob Pickney
Subject: TPUC KPI Compliance Report for 2/1/2020 8:00:07 AM

TPUC Flow KPI Report for 1/31/2020

Jeremy Stewart	Permitted	Expected	Actual	% of Expected	AvgFlow	% o
Hidden Springs RSF	30750	19600	-13	0.00	6086.03	
Summit View RSF	8000	5775	342	0.06	2947.46	

Jeff Ridsen

From: Jeff Ridsen
Sent: Tuesday, February 4, 2020 9:23 AM
To: 'Britton Dotson'; Brad Harris
Cc: George Garden; Brian Ham; Jordan Fey; Patsy Fulton; Matthew Nicks; Billy Dranes; Marshall Fall; Stephanie Durman; Patrick Parker; Jessica Murphy; Tim Jennette
Subject: RE: TWSI Cross Plains Response
Attachments: 00190803199.00 - Adenus Group - Cross Plains, TN - Domestic Well Survey.pdf

Britton –

Attached is the TTL domestic well study for Cross Plains. The liner report is too large to email. Do you have DropBox or some other way for us to upload the file to you? Otherwise, we can mail it. TWSI is working on plans to have the soils in the area evaluated for additional drip as well as working on getting electric out to the building. Plans will be submitted within the next 60 days as to the next steps the utility will be taking to address the site. Please reach out to Matt Nicks with any questions/comments – matthew.nicks@adenus.com or 615-220-7200.

Thanks,

Jeff

From: Britton Dotson <Britton.Dotson@tn.gov>
Sent: Wednesday, January 15, 2020 2:25 PM
To: Jeff Ridsen <Jeff.Ridsen@Adenus.com>; Brad Harris <Brad.Harris@tn.gov>
Cc: George Garden <George.Garden@tn.gov>; Brian Ham <Brian.Ham@tn.gov>; Jordan Fey <Jordan.Fey@tn.gov>; Patsy Fulton <Patsy.Fulton@tn.gov>; Matthew Nicks <Matthew.Nicks@adenus.com>; Billy Dranes <Billy.Dranes@adenus.com>; Marshall Fall <marshall.fall@adenus.com>; Stephanie Durman <Stephanie.Durman@tn.gov>; Patrick Parker <Patrick.Parker@tn.gov>; Jessica Murphy <Jessica.Murphy@tn.gov>; Tim Jennette <Tim.Jennette@tn.gov>
Subject: RE: TWSI Cross Plains Response

*** This is an EXTERNAL email. Please exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Jeff and Matt,

Weather permitting DWR staff plan to visit the Cross Plains Treatment Facility site on the afternoon of January 21st. There will be approximately five staff making this visit. If possible we would like to be accompanied by you or one of your representatives, particularly the operator for the Cross Plains Facility if he is available. We plan to meet at the Mapco Service Station at 1:00 PM and carpool directly to the site. Please let me know if you or one of your staff plan to meet us at the site.

If weather delays our site visit I will let you know as soon as we make that decision.

Thanks, Britton

From: Jeff Ridsen [<mailto:Jeff.Ridsen@Adenus.com>]
Sent: Monday, December 23, 2019 1:52 PM
To: Brad Harris

Cc: Britton Dotson; George Garden; Brian Ham; Jordan Fey; Patsy Fulton; Matthew Nicks; Billy Dranes; Marshall Fall; Stephanie Durman; Patrick Parker
Subject: [EXTERNAL] TWSI Cross Plains Response

***** This is an EXTERNAL email. Please exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email - STS-Security. *****

Brad –

Please see attached for TWSI's response to the Cross Plains NOV. Please direct any questions/comments to Matt Nicks at matthew.nicks@adenus.com or 615-220-7200.

Thanks,

Jeff



Jeff Ridsen

CEO

Adenus Group, LLC | 849 Aviation Pkwy, Smyrna, TN 37167

Direct: 615.220.7171 | Toll Free: 888.4.ADENUS Ext: 145 | Mobile: 615.691.2018 | Fax: 615.220.7207

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5010 Linbar Drive, #153
Nashville, TN 37211
615.331.7770
www.TTLUSA.com

January 29, 2020

Mr. Matthew Nicks
Adenus Group, LLC
849 Aviation Parkway
Smyrna, Tennessee 37167

**RE: *Lagoon Liner Investigation
Inactive Treatment Lagoon
Dogwood Lane
Cross Plains, Robertson County, Tennessee
TTL Project No. 000190803199.00***

Dear Mr. Nicks:

TTL, Inc. (TTL) is pleased to provide the Adenus Group, LLC (Adenus) this Lagoon Liner Investigation report for the above-referenced property. This report summarizes our findings and conclusions from the investigation completed by TTL.

PROJECT BACKGROUND

TTL understands the site consists of an inactive treatment lagoon that is part of a wastewater treatment system. The lagoon reportedly was constructed with a clay liner, and it holds water in approximately 20 percent of the lagoon footprint. The lagoon location is depicted on the Site Location Map, derived from a portion of the USGS 7.5-minute Orlinda, Tennessee quadrangle, included as **Attachment A**.

The Tennessee Department of Environment and Conservation (TDEC) instructed Adenus to conduct several tasks to evaluate the lagoon. One of the requested tasks is to confirm the presence of a clay liner in the floor of the lagoon. TTL conducted limited drilling and sample collection to confirm that a clay liner is present in the lagoon floor.

FIELD WORK AND RESULTS

TTL personnel mobilized to the site on January 16, 2020, to observe limited drilling to investigate the presence of a clay liner in the floor of the lagoon. The original scope of work, as outlined in TTL Proposal No. P00190803199.00, was to advance three borings in client-specified locations on the north, south, and east sides of the lagoon. However, to gain more coverage of the lagoon floor during the confirmation drilling, two additional borings were advanced for a total of five borings. Borings were not planned along the west side of the lagoon where the containment dam is located.

Drilling services for the project were performed by Tri-State Drilling, LLC, of Chattanooga, Tennessee, using direct-push techniques. Weather conditions were partly cloudy with temperatures averaging around 30 degrees Fahrenheit. The approximate locations of the test borings are shown on the figure included as **Attachment B**. The locations and total depths of the five test borings are summarized on **Table 1** below.

Table 1: Test Boring Summary		
Boring ID	Location	Approximate Total Depth
TB-01	Southwest corner of the lagoon	7.5 ft. bgs
TB-02	East side of the lagoon	5 ft. 7 in. bgs
TB-03	Northwest corner of the lagoon	6 ft. bgs
TB-04	North side of the lagoon	3 ft. bgs
TB-05	South side of the lagoon	5 ft. bgs

*Below ground surface (bgs)

A review of the U.S.G.S. Geologic Quadrangle for Orlinda, Tennessee indicates that the lagoon is underlain by the Warsaw Limestone formation. Chert nodules and fragments, reportedly common in the Warsaw Formation, were observed in the surficial soils exposed in the lagoon slopes.

The unconsolidated materials penetrated in each boring during drilling consisted of an uppermost interval of brown to reddish-brown clay residuum with abundant chert fragments, inferred to be weathered material of the Warsaw Formation. This was in turn underlain by a reddish-brown clay material, the clay liner, that varied in thickness from approximately 2 to 3 feet. The clay liner was in turn positioned on underlying bedrock in each boring. Recovery was generally good, approaching 100% in each boring. The exception is boring TB-03, which was attempted three times without recovering the clay liner interval due to plugging by chert fragments. However, based on penetration rates (comparable to those of the other four borings) and clay material noted on the outside of the drilling rod, the approximate 3.2 to 5.8-foot interval was inferred to be the clay liner interval.

The soil samples retrieved from each test boring were placed in a core box and photographed, with the clay liner interval indicated by red hatching. The photographs are included as **Attachment C**. Selected photographs of the drilling conducted on January 16, 2020 are included as **Attachment D**.

CONCLUSIONS

As indicated on the photographs included as Attachment C, a clay liner was identified at the five test boring locations around the north, east and south perimeter of the lagoon. The clay liner was observed in each boring to be approximately 2 to 3-feet thick.

LIMITATIONS

This assessment was designed to be limited in scope and provides only a snapshot of the subsurface within the limits of the study area and at the five locations tested. While the data presented in this report is useful in providing an indication as to the subsurface conditions across the study area, our findings cannot be extrapolated to infer a clear understanding of the subsurface conditions beneath the study area in its entirety.

CLOSING

TTL appreciates the opportunity to provide professional services on this important project. If you have questions, or need additional information, please contact our office at your convenience.

Sincerely,
TTL, Inc.



Zachary Blair
Project Professional



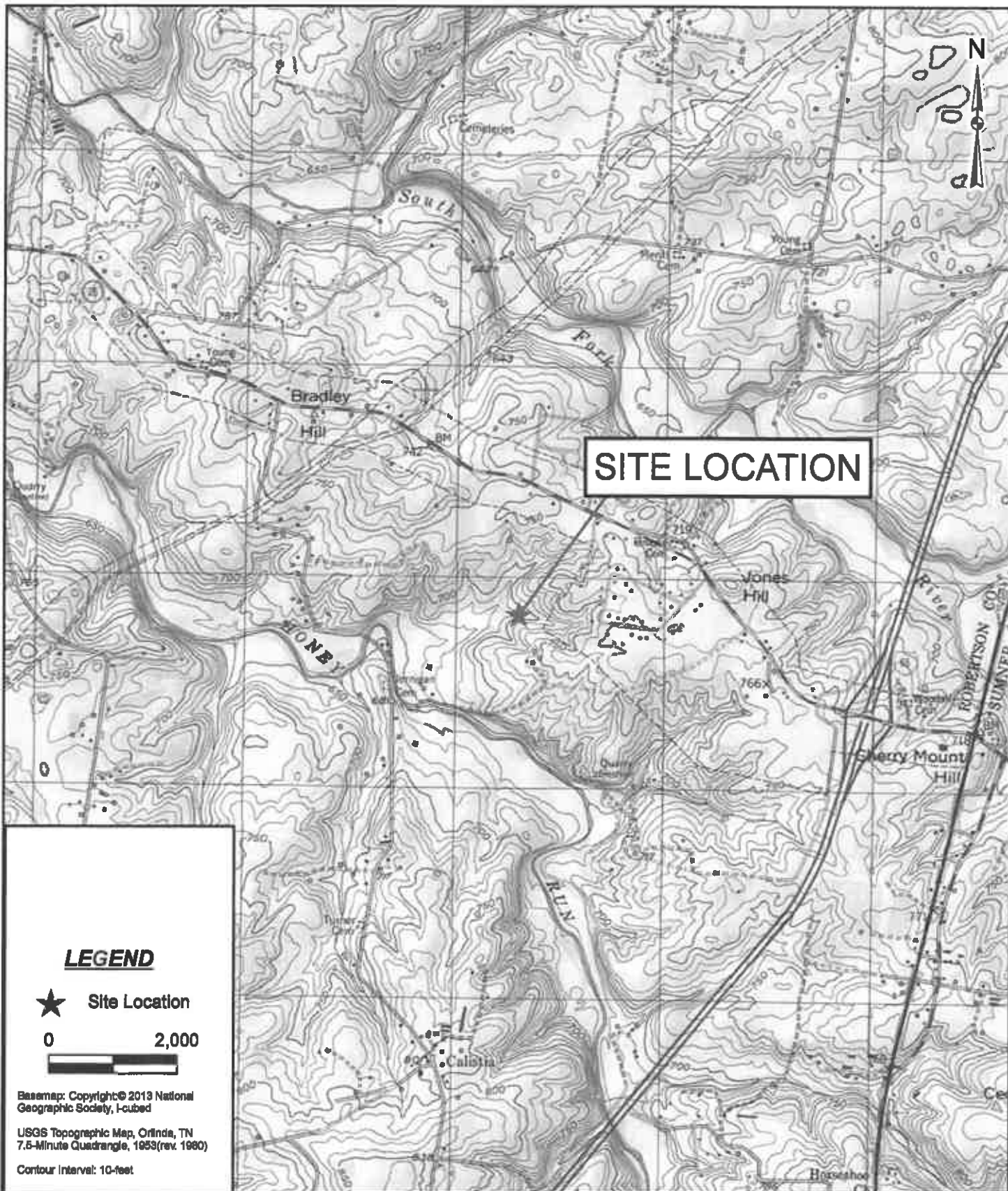
Larry Wilbanks, P.G.
Nashville Environmental Group Leader

Attachment: A: Site Location Map
 B: Test Boring Location Map
 C: Test Boring Sample Photographs
 D: Selected Photographs

**Lagoon Liner Investigation Report
Inactive Treatment Lagoon
Cross Plains, Robertson County, Tennessee
TTL Project No. 000190803199.00**

ATTACHMENT A

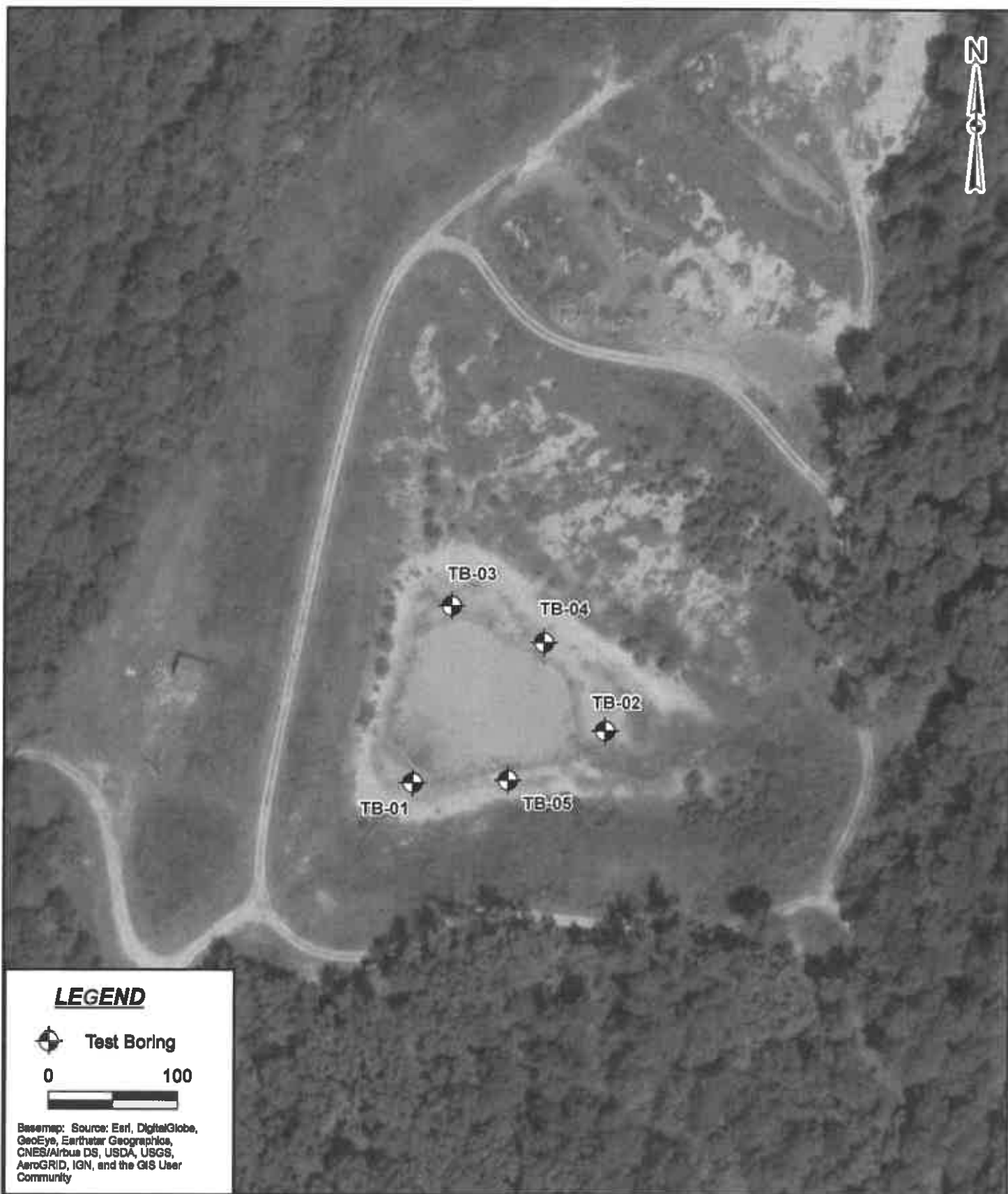
SITE LOCATION MAP



**Lagoon Liner Investigation Report
Inactive Treatment Lagoon
Cross Plains, Robertson County, Tennessee
TTL Project No. 000190803199.00**

ATTACHMENT B

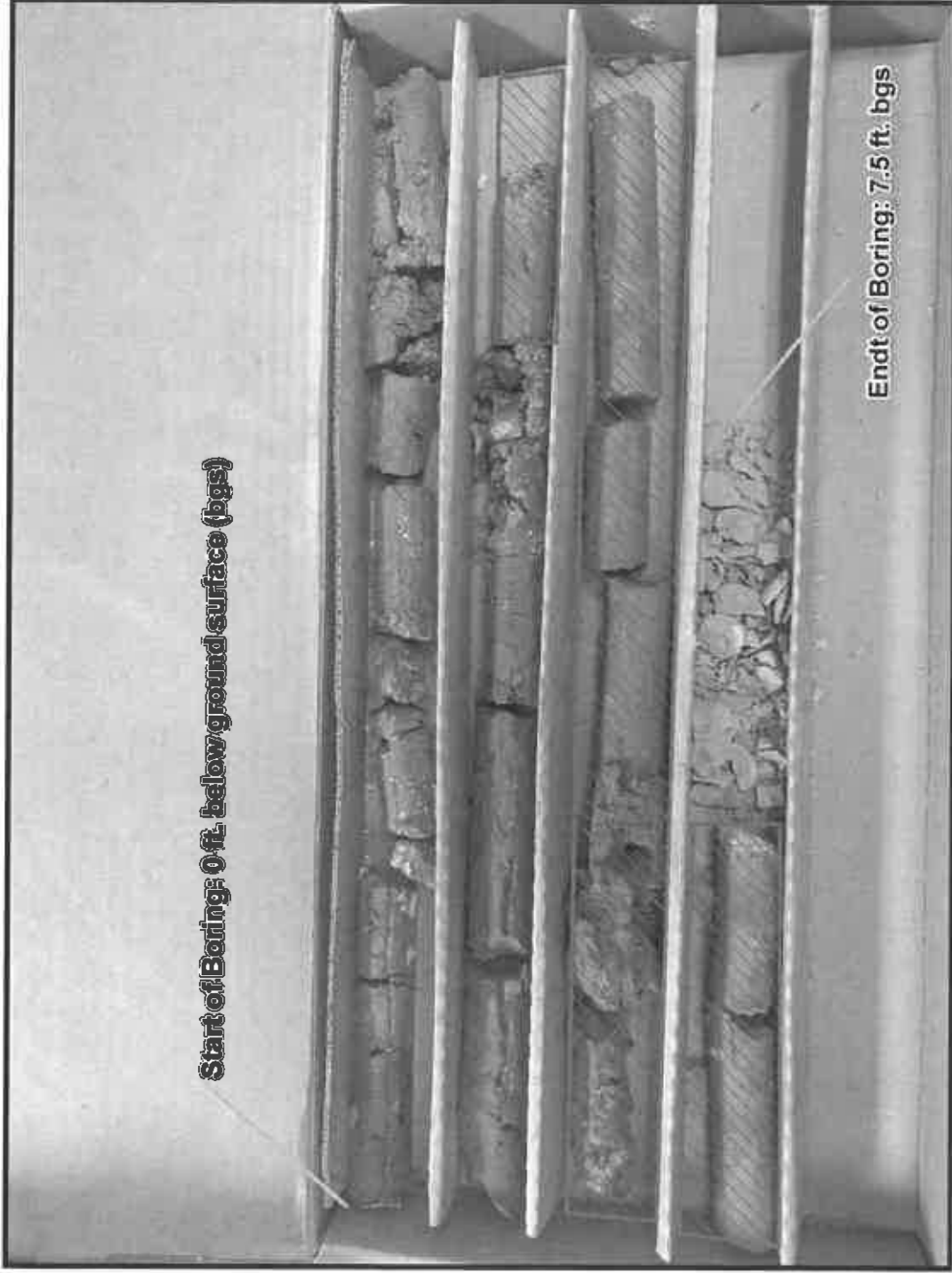
TEST BORING LOCATION MAP



**Lagoon Liner Investigation Report
Inactive Treatment Lagoon
Cross Plains, Robertson County, Tennessee
TTL Project No. 000190803199.00**

ATTACHMENT C

**TEST BORING SAMPLE
PHOTOGRAPHS**



*Area in red indicates clay liner.

TTL

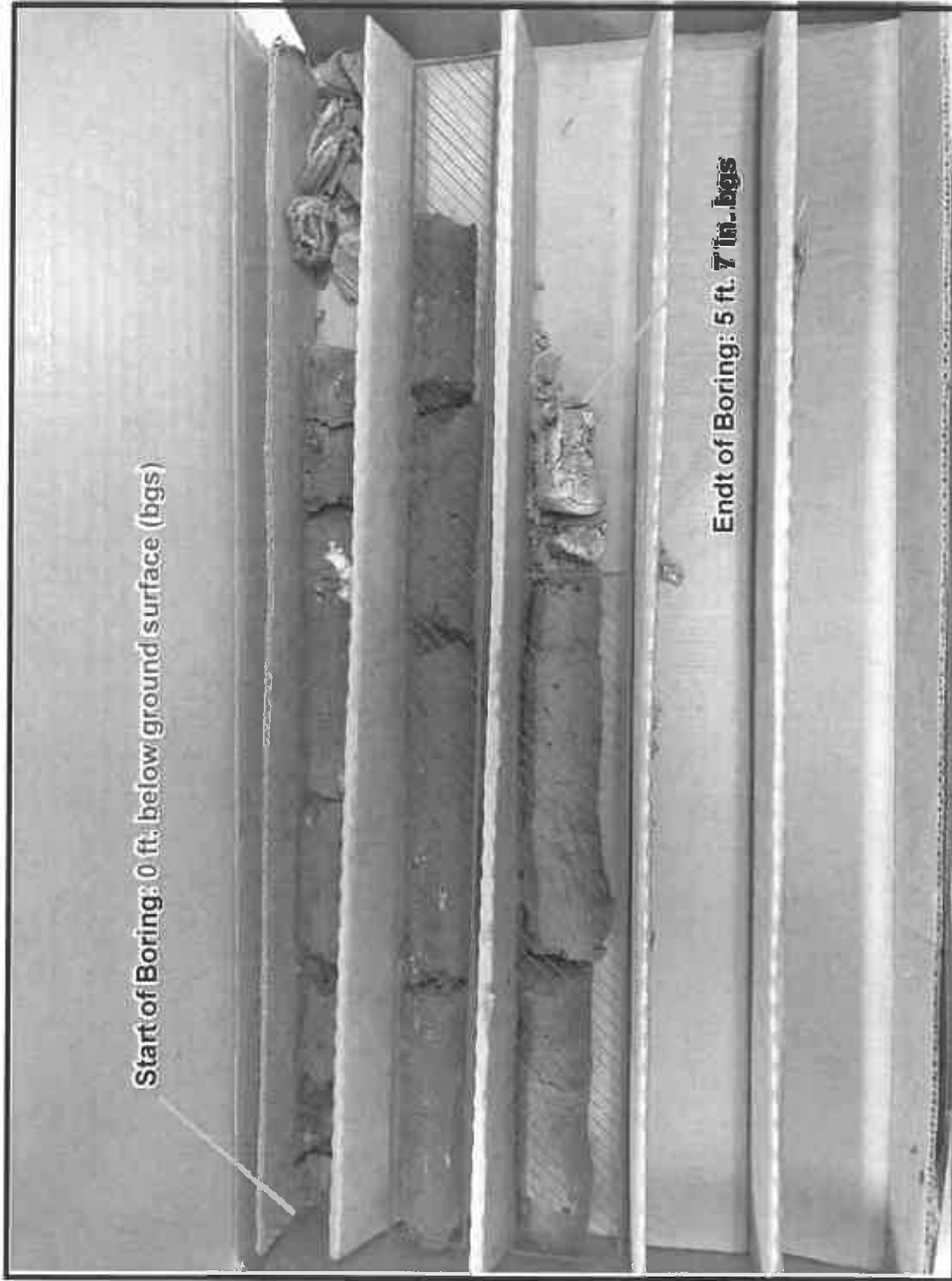
LAGOON LINER INVESTIGATION

ADENUS GROUP, LLC

**DOGWOOD LANE
CROSS PLAINS, ROBERTSON COUNTY, TENNESSEE**

Drain By: ZSG
Checked By: LW
Draining Date: 12/7/2020
Date Visited: 11/5/2020
Job No.: 000190303199.00
File Name:
19_3199_TB1.mxd

TB-01



*Area in red indicates clay liner.

TTL

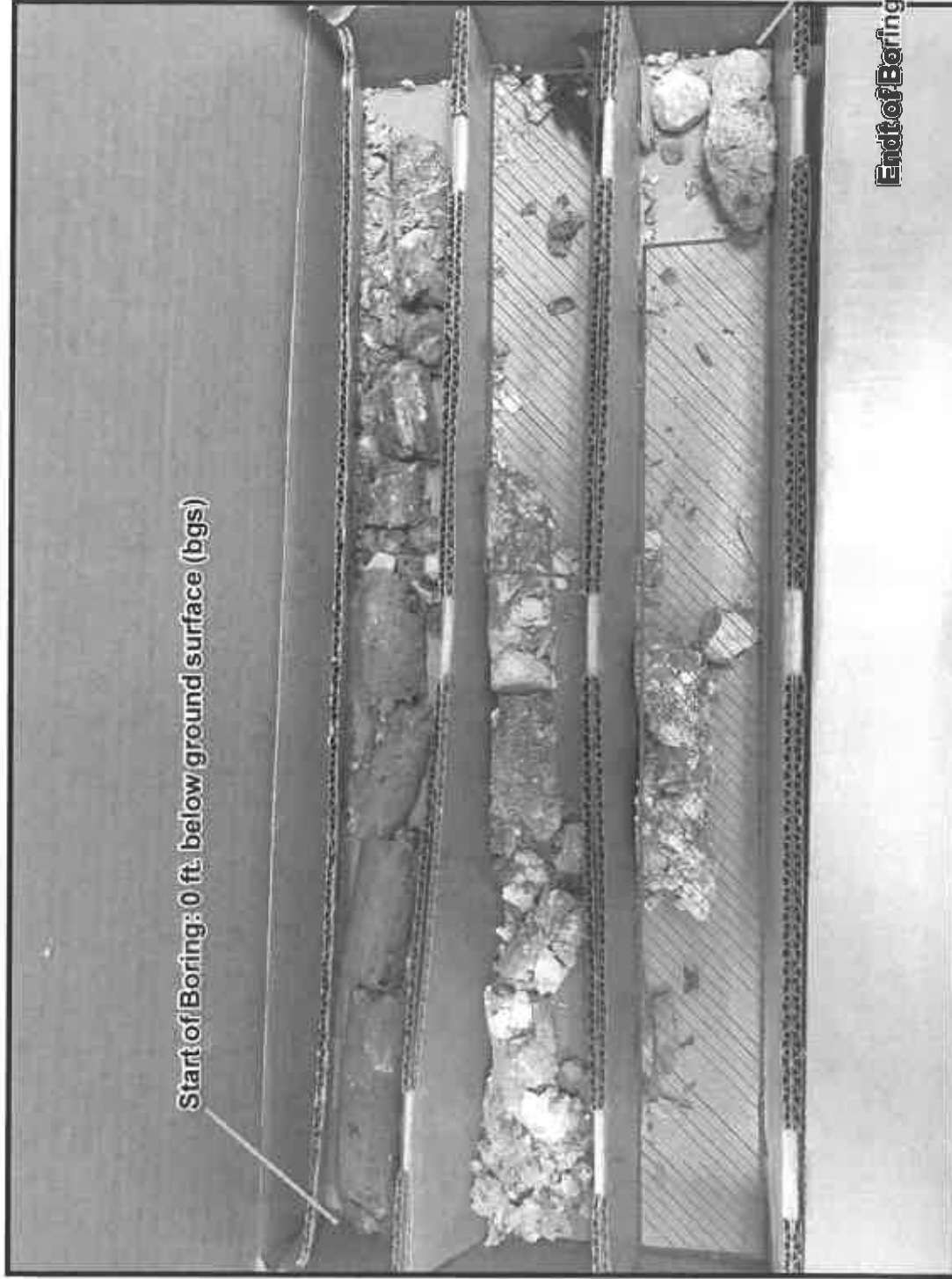
LAGOON LINER INVESTIGATION

ADENUS GROUP, LLC

**DOGWOOD LANE
CROSS PLAINS, ROBERTSON COUNTY, TENNESSEE**

Drawn By: ZBB
Checked By: LW
Drawing Date: 1/27/2020
Date Plotted: 1/25/2020
Job No: 0001#0003189.00
File Name: 1e3189189.mxd

7B-02



*Area in red indicates inferred clay liner interval.

TTL

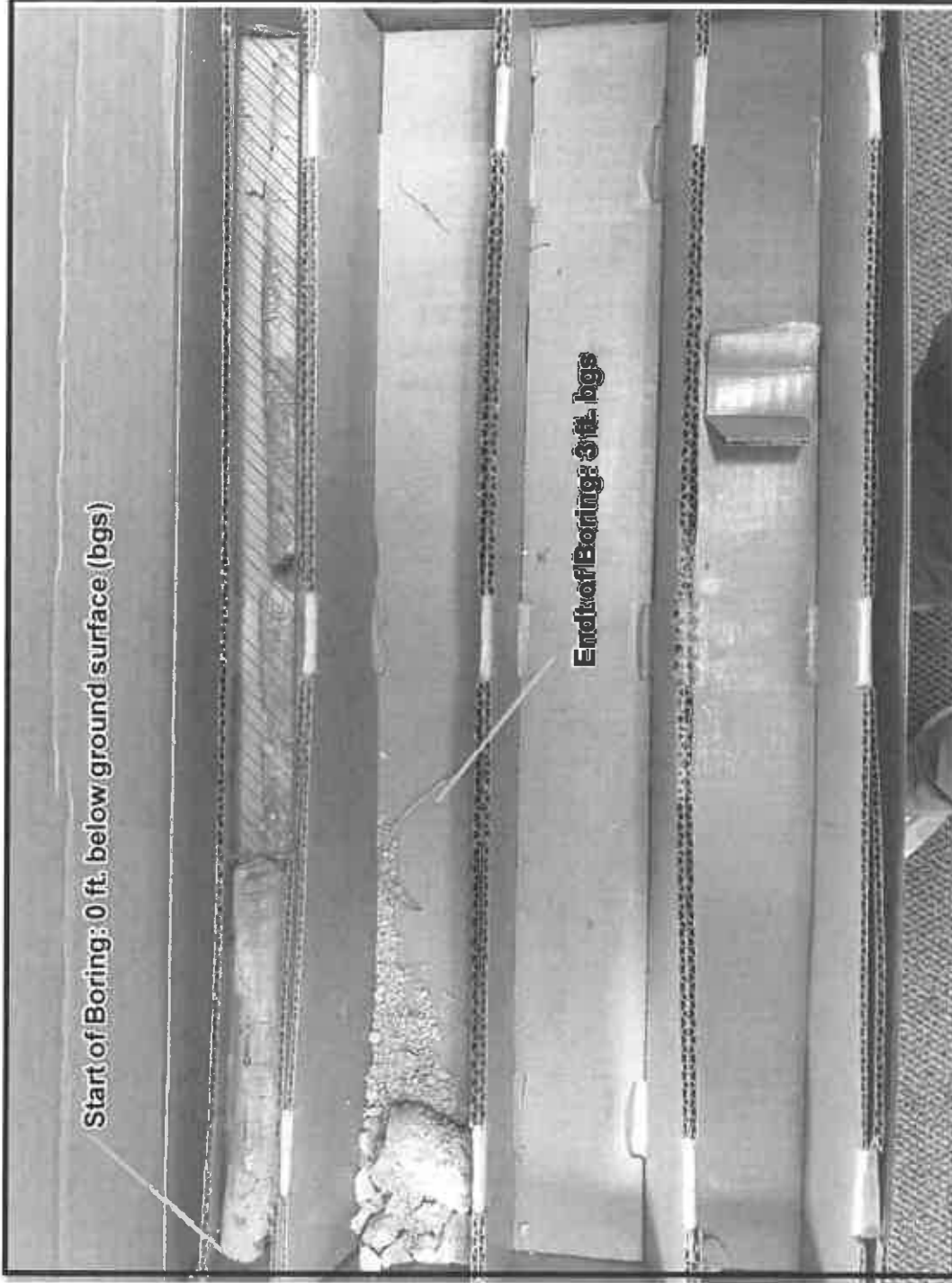
LAGOON LINER INVESTIGATION

ADENUS GROUP, LLC

**DOGWOOD LANE
GROSS PLAINS, ROBERTSON COUNTY, TENNESSEE**

Drawn By: ZSB
Checked By: LW
Drawing Date: 12/7/2020
Date Visited: 4/15/2020
Job No.: 000190003199.00
File Name:
12-3199-1-B3.mxd

7B-03



*Area in red indicates clay liner.

TTL

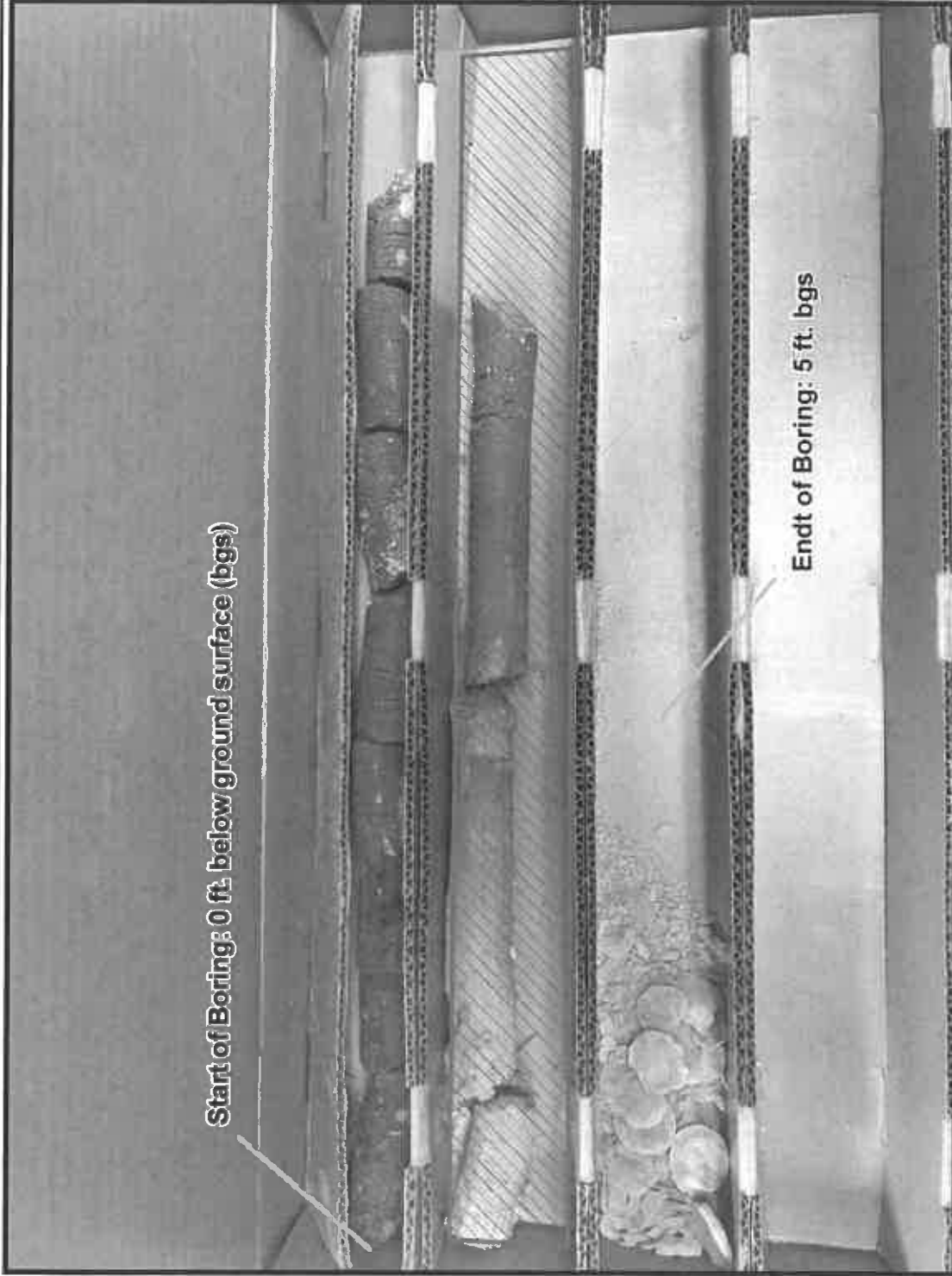
LAGOON LINER INVESTIGATION

ADENUS GROUP, LLC

**DOGWOOD LANE
CROSS PLAINS, ROBERTSON COUNTY, TENNESSEE**

Drawn By: ZEB
Checked By: LW
Drawing Date: 1/27/2020
Date Visited: 1/15/2020
Job No: 00010003189.00
File Name:
19_3189_TB4.mxd

TB-04



*Area in red indicates clay liner.

TTL

LAGOON LINER INVESTIGATION

ADENUS GROUP, LLC

**DOGWOOD LANE
GROSS PLAINS, ROBERTSON COUNTY, TENNESSEE**

Drawn By: ZEB
Checked By: LW
Drawing Date: 1/27/2020
Date Visited: 1/15/2020
Job No.: 000190103189.00
File Name:
10 3189 1B5 mod

TB-05

**Lagoon Liner Investigation Report
Inactive Treatment Lagoon
Cross Plains, Robertson County, Tennessee
TTL Project No. 000190803199.00**

ATTACHMENT D

SELECTED PHOTOGRAPHS



Photograph 1: View of the lagoon, facing southwest.



Photograph 2: View of drilling at the TB-01 location.



Photograph 3: View of drilling at the TB-02 location.



Photograph 4: View of drilling at the TB-03 location.



Photograph 5: View of drilling at the TB-04 location.



Photograph 6: View of drilling at the TB-05 location.

TTL

5010 Linbar Drive, Ste. 153

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Nashville, TN 37211

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Phone 615.331.7770

*

www.ttlusa.com



5010 Linbar Drive, #153
Nashville, TN 37211
615.331.7770
www.TTLUSA.com

January 27, 2020

Mr. Matthew Nicks
Adenus Group, LLC
849 Aviation Parkway
Smyrna, Tennessee 37167

**RE: *Domestic Well Survey
Inactive Treatment Lagoon
Dogwood Lane
Cross Plains, Robertson County, Tennessee
TTL Project No. 000190803199.00***

Dear Mr. Nicks:

TTL, Inc. (TTL) is pleased to provide the Adenus Group, LLC (Adenus) this Domestic Well Survey for the above-referenced property. The following report summarizes our findings and conclusions from the conducted well survey.

PROJECT BACKGROUND

TTL understands the site consists of an inactive treatment lagoon that is part of a wastewater treatment system. The lagoon was reportedly constructed with a clay liner, and it holds water in approximately 20 percent of the lagoon footprint. The lagoon location is depicted on the Site Location Map, derived from a portion of the USGS 7.5-minute Orlinda, Tennessee quadrangle, included as **Attachment A**.

The Tennessee Department of Environment and Conservation (TDEC) requested that a domestic water well survey be conducted as one task in evaluation of the lagoon, and that the domestic water well survey encompass a 2-mile radius of the lagoon.

WELL DATA RESOURCES

To collect data on water wells located within a 2-mile radius of the lagoon, TTL engaged Environmental Data Resources, Inc. (EDR) to conduct a search of water wells within the requested 2-mile radius of the lagoon. TTL also obtained water well database information for wells located on the Orlinda, Portland, and White House, Tennessee topographic quadrangles from the Tennessee Division of Water Resources (TDWR).

RESULTS

Ten water wells were identified and mapped by EDR within a 2-mile radius of the lagoon. The referenced EDR GeoCheck Report used as part of this domestic well survey was issued on December 19, 2019 (Inquiry Number: 5911751.1s).

Eighteen water wells were identified within a 2-mile radius of the lagoon through georeferencing of data provided by TDWS. The water well location data was provided on excel spreadsheets for the Orlinda, Portland, and White House, Tennessee topographic quadrangles.

The approximate locations of the water supply wells identified by EDR and TDWR are shown on the figure included as **Attachment B**. Ten of the wells identified by TDWR appear to closely match the locations of ten of the wells identified by EDR, and are inferred to represent the same wells. Based on this data, it appears that a total of 18 domestic water supply wells were identified within a 2-mile radius of the lagoon.

The EDR GeoCheck Report referenced in this report is included as **Attachment C**. The TDWR database spreadsheet is included as **Attachment D**. A table that lists the identified wells is included as **Attachment E**.

CONCLUSIONS

Based on review of water well data provided by EDR and TDEC, TTL has identified the approximate locations of 18 domestic water wells within a 2-mile radius of the subject property.

LIMITATIONS

TTL has no knowledge of additional domestic water supply wells within a 2-mile radius of the lagoon site that were not identified by EDR or TDWR. The locations of the identified water wells shown on the attached figure are approximate and were not confirmed through site reconnaissance by TTL. The scope of services summarized in this report consisted of a desktop review of readily available domestic water well data, and did not include a field survey.

CLOSING

TTL appreciates the opportunity to provide professional services on this important project. If you have questions, or need additional information, please contact our office at your convenience.

Sincerely,
TTL, Inc.



Zachary Blair
Project Professional



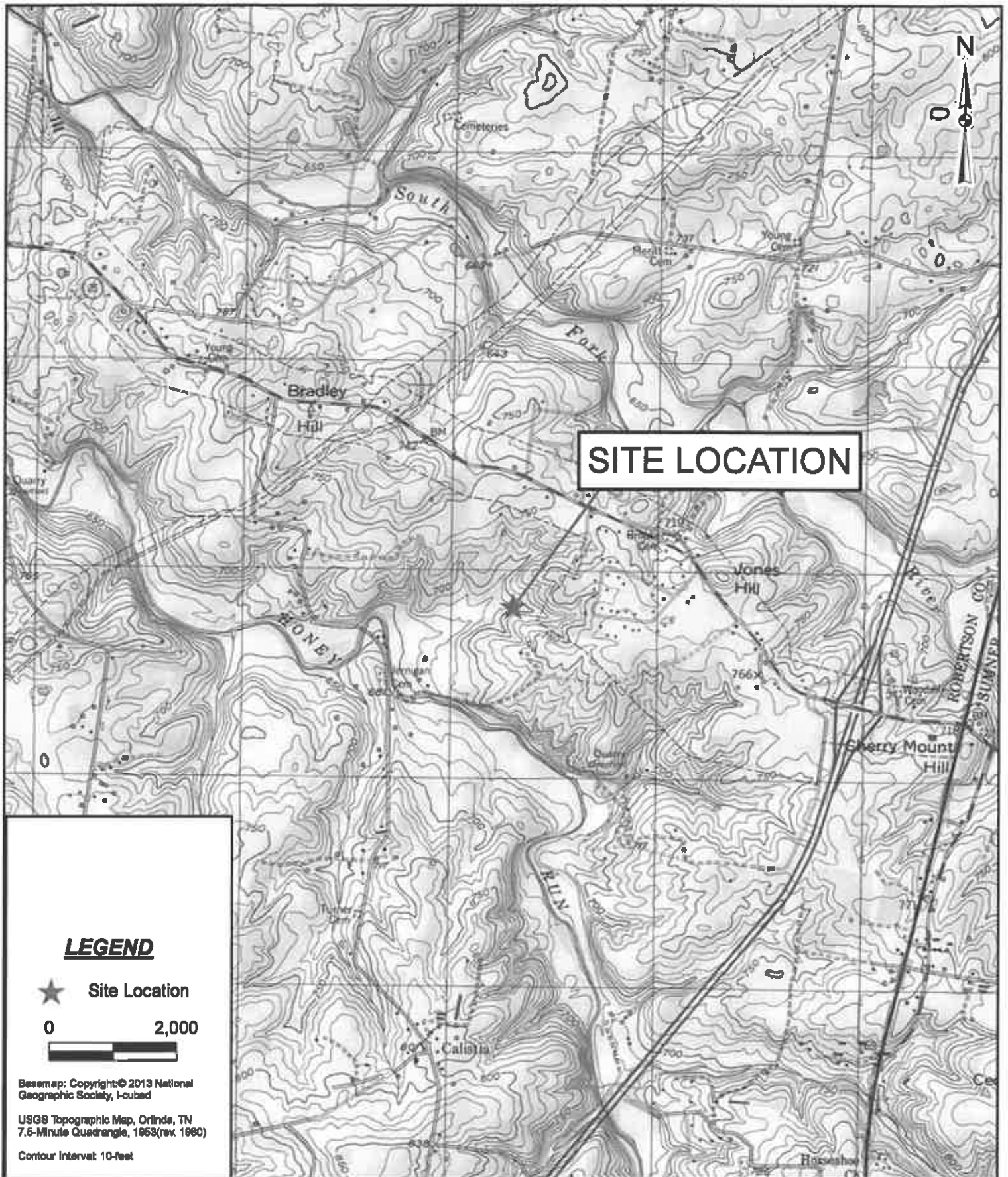
Larry Wilbanks, P.G.
Nashville Environmental Group Leader

Attachments: A: Site Location Map
 B: Domestic Well Survey Map
 C: EDR GeoCheck Report
 D: TDWR Database Spreadsheet
 E: Summary Table of Identified Domestic Water Supply Wells

**Domestic Well Survey Report
Inactive Treatment Lagoon
Cross Plains, Robertson County, Tennessee
TTL Project No. 000190803199.00**

ATTACHMENT A

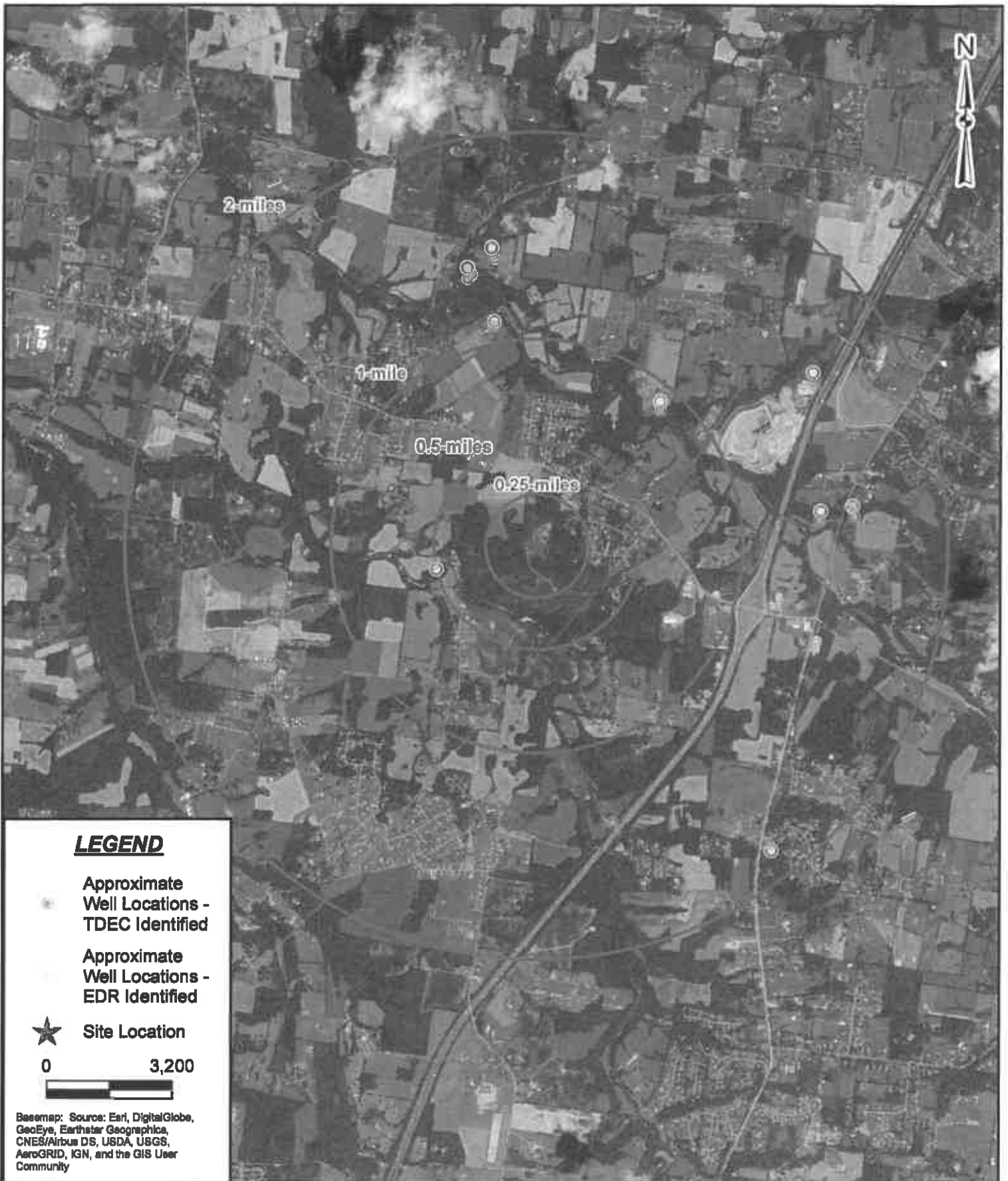
SITE LOCATION MAP



**Domestic Well Survey Report
Inactive Treatment Lagoon
Cross Plains, Robertson County, Tennessee
TTL Project No. 000190803199.00**

ATTACHMENT B

DOMESTIC WELL SURVEY MAP



LEGEND

Approximate
Well Locations -
TDEC Identified

Approximate
Well Locations -
EDR Identified

★ Site Location

0 3,200

Basemap: Source: Esri, DigitalGlobe,
GeoEye, Earthstar Geographics,
CNES/Airbus DS, USDA, USGS,
AeroGRID, IGN, and the GIS User
Community

TTL

DOMESTIC WELL SURVEY

ADENUS GROUP, LLC

**DOGWOOD LANE
CROSS PLAINS, ROBERTSON COUNTY, TENNESSEE**

Drawn By: ZBB
Checked By: LW
Drawing Date: 1/9/2020
Approx. Scale: 1" = 200'
Job No.: 000110201199.00
File Name:
19.3199 WELL.mxd

**WELL SURVEY
MAP**

**Domestic Well Survey Report
Inactive Treatment Lagoon
Cross Plains, Robertson County, Tennessee
TTL Project No. 000190803199.00**

ATTACHMENT C

EDR GEOCHECK REPORT

Domestic Well Survey - Inactive Treatment Lagoon

Dogwood Lane

Cross Plains, TN 37049

Inquiry Number: 5911751.1s

December 19, 2019

The EDR GeoCheck® Report



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

PAGE

GEOCHECK ADDENDUM

Physical Setting Source Addendum.....	A-1
Physical Setting Source Summary.....	A-2
Physical Setting Source Map.....	A-7
Physical Setting Source Map Findings.....	A-8
Physical Setting Source Records Searched.....	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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GEOCHECK® - PHYSICAL SETTING SOURCE REPORT

TARGET PROPERTY ADDRESS

DOMESTIC WELL SURVEY - INACTIVE TREATMENT LAGOON
DOGWOOD LANE
CROSS PLAINS, TN 37049

TARGET PROPERTY COORDINATES

Latitude (North):	36.532171 - 36° 31' 55.82"
Longitude (West):	86.661421 - 86° 39' 41.12"
Universal Transverse Mercator:	Zone 16
UTM X (Meters):	530309.8
UTM Y (Meters):	4042828.0
Elevation:	691 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	36086-E6 ORLINDA, TN
Version Date:	1980

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

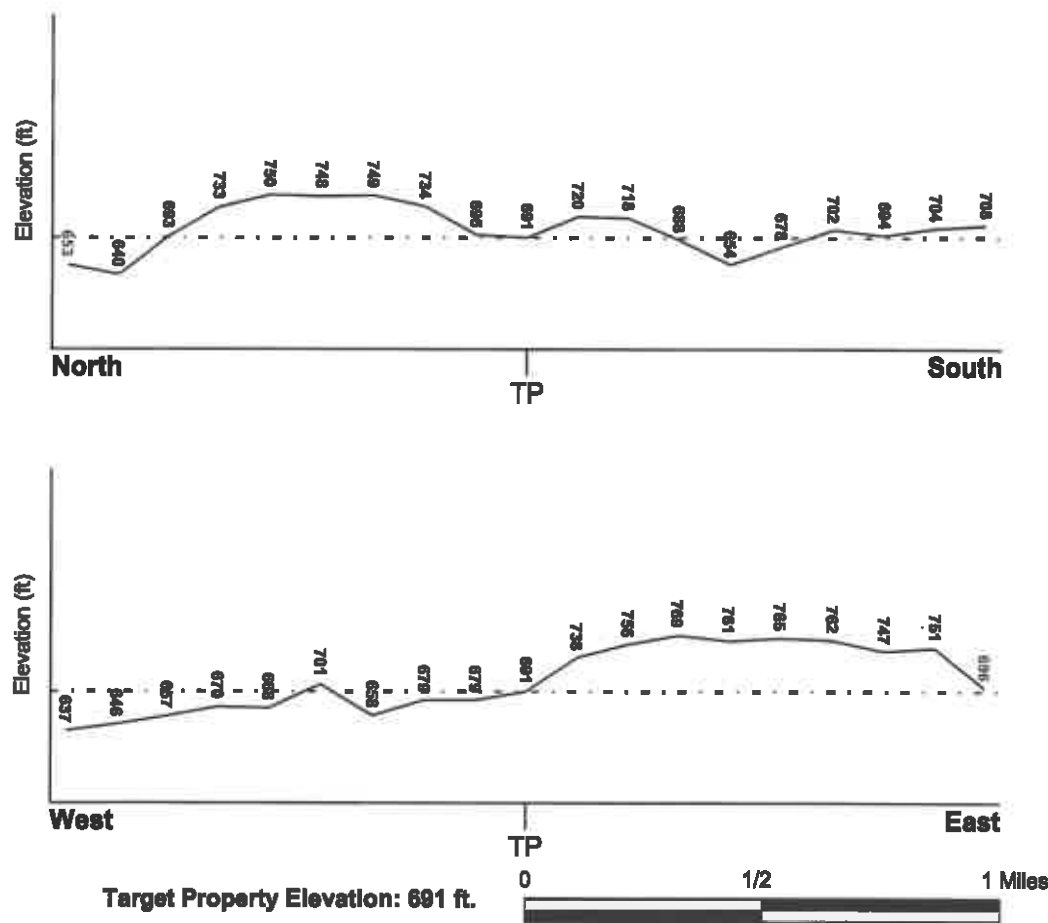
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General WSW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property

47147C0270C

Additional Panels in search area:

Not Reported

FEMA Source Type

FEMA FIRM Flood data

FEMA Source Type

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property
ORLINDA

NWI Electronic
Data Coverage

YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era: Paleozoic
System: Mississippian
Series: Meramecian Series
Code: M2 (decoded above as Era, System & Series)

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name: BAXTER

Soil Surface Texture: cherty - silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: HIGH

Depth to Bedrock Min: > 60 inches

Depth to Bedrock Max: > 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 Inches	9 Inches	cherty - silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 2.00 Min: 0.60	Max: 6.50 Min: 4.50
2	9 Inches	16 Inches	cherty - silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 2.00 Min: 0.60	Max: 6.50 Min: 4.50
3	16 Inches	48 Inches	cherty - silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 2.00 Min: 0.60	Max: 5.50 Min: 4.50
4	48 Inches	99 Inches	cherty - clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Clayey Gravel	Max: 2.00 Min: 0.60	Max: 5.50 Min: 4.50

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subinvariant soil types may appear within the general area of target property.

Soil Surface Textures: silt loam

Surficial Soil Types: silt loam

Shallow Soil Types: silt loam
silty clay loam

Deeper Soil Types: clay
loam
silty clay loam
silty clay

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	2.000
Federal FRDS PWS	2.000
State Database	2.000

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

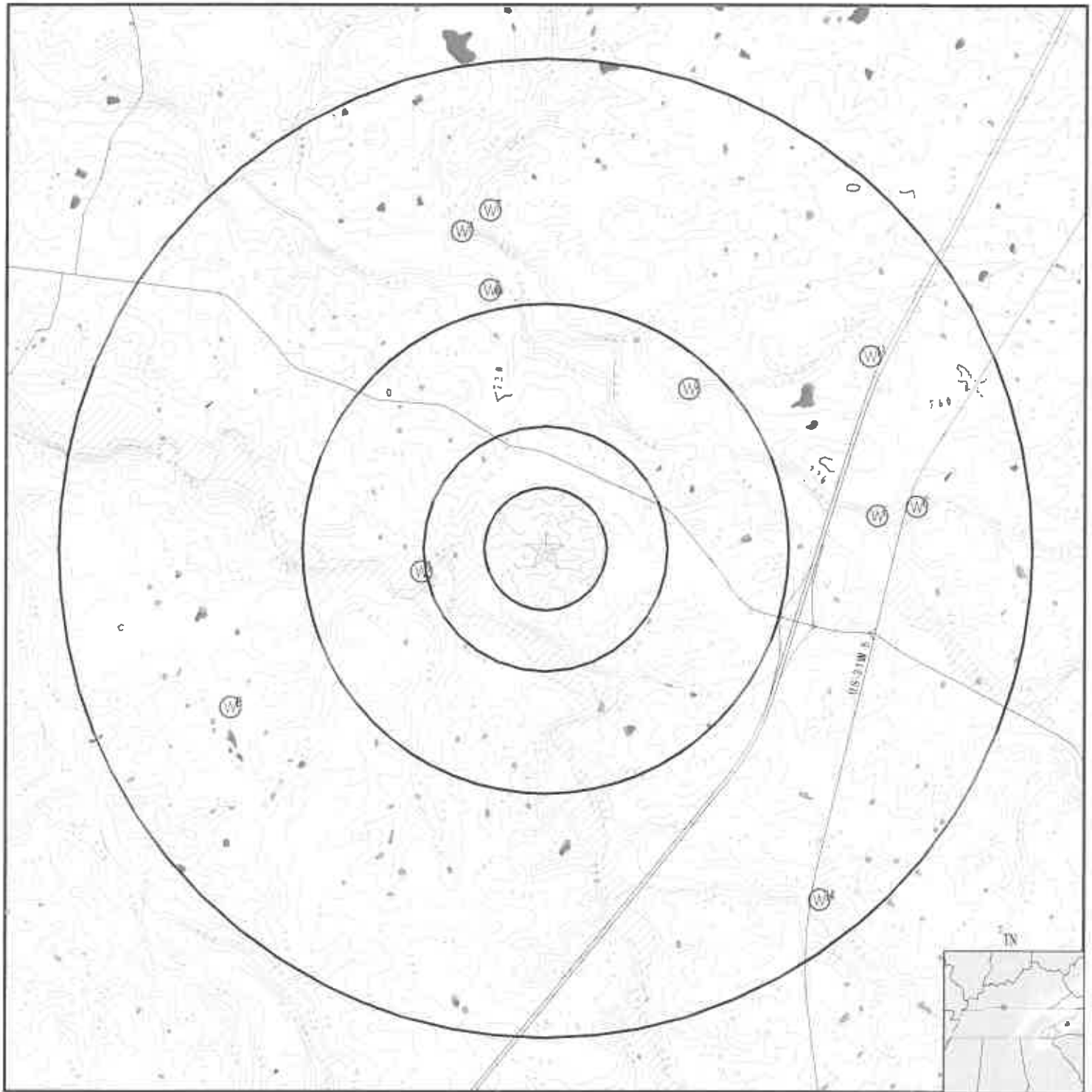
<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
1	TN7000000044603	1/2 - 1 Mile West
2	TN7000000045164	1/2 - 1 Mile NE
3	TN7000000045030	1 - 2 Miles NNW
A4	TN7000000044987	1 - 2 Miles NNW
A5	TN7000000044988	1 - 2 Miles NNW
6	TN7000000044671	1 - 2 Miles East
7	TN7000000044933	1 - 2 Miles North
B8	TN7000000044784	1 - 2 Miles WSW
B9	TN7000000044030	1 - 2 Miles WSW
B10	TN7000000044791	1 - 2 Miles WSW
C11	TN7000000080948	1 - 2 Miles East
C12	TN7000000080946	1 - 2 Miles East
13	TN7000000044985	1 - 2 Miles ENE
14	TN7000000080947	1 - 2 Miles SE

PHYSICAL SETTING SOURCE MAP - 5911751.1s



- ✓ County Boundary
- ✓ Major Roads
- Contour Lines
- ⊙ Earthquake epicenter, Richter 5 or greater
- ⊙ Water Wells
- ⊙ Public Water Supply Wells
- Cluster of Multiple Icons

- ↑ Groundwater Flow Direction
- ⊙ Indeterminate Groundwater Flow at Location
- ⊙ Groundwater Flow Varies at Location
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory



SITE NAME: Domestic Well Survey - Inactive Treatment Lagoon
 ADDRESS: Dogwood Lane
 Cross Plains TN 37049
 LAT/LONG: 36.532171 / 86.661421

CLIENT: TTL Inc.
 CONTACT: Zachary Blair
 INQUIRY #: 5911751.1s
 DATE: December 19, 2019 1:29 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

1
West
1/2 - 1 Mile
Lower

TN WELLS TN7000000044603

Well #: 14700582
Total Depth: 100
Quad #: 0309SW8
Casing Depth: 37
Intended Well Use: Residential

License Code: 497
Est Yield: 0
Driller Tag #: Not Reported
Depth to Water: 90

2
NE
1/2 - 1 Mile
Higher

TN WELLS TN7000000045184

Well #: 20150232
Total Depth: 118
Quad #: 0309SW9
Casing Depth: 42
Intended Well Use: Not Reported

License Code: 895
Est Yield: 0
Driller Tag #: GEO3105
Depth to Water: 0

3
NNW
1 - 2 Miles
Lower

TN WELLS TN7000000045030

Well #: 20073986
Total Depth: 102
Quad #: 0309SE7
Casing Depth: 20
Intended Well Use: Farm

License Code: 736
Est Yield: 0
Driller Tag #: D0045165
Depth to Water: 50

A4
NNW
1 - 2 Miles
Lower

TN WELLS TN7000000044987

Well #: 20060436
Total Depth: 140
Quad #: 0309SW5
Casing Depth: 41
Intended Well Use: Residential

License Code: 756
Est Yield: 20
Driller Tag #: D0074402
Depth to Water: 135

A5
NNW
1 - 2 Miles
Higher

TN WELLS TN7000000044986

Well #: 20060437
Total Depth: 85
Quad #: 0309SW5

License Code: 756
Est Yield: 5
Driller Tag #: D0074405

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Casing Depth: 25
Intended Well Use: Residential

Depth to Water: 80

6
East
1 - 2 Miles
Higher

TN WELLS TN7000000044671

Well #: 14700651
Total Depth: 45
Quad #: 0309SW9
Casing Depth: 21
Intended Well Use: Residential

License Code: 98
Est Yield: 10
Driller Tag #: Not Reported
Depth to Water: 35

7
North
1 - 2 Miles
Higher

TN WELLS TN7000000044933

Well #: 20031019
Total Depth: 140
Quad #: 0309SW6
Casing Depth: 20
Intended Well Use: Irrigation

License Code: 756
Est Yield: 12
Driller Tag #: D0062052
Depth to Water: 135

B8
WSW
1 - 2 Miles
Higher

TN WELLS TN7000000044784

Well #: 14700767
Total Depth: 55
Quad #: 0309SW8
Casing Depth: 40
Intended Well Use: Residential

License Code: 497
Est Yield: 10
Driller Tag #: Not Reported
Depth to Water: 50

B9
WSW
1 - 2 Miles
Higher

TN WELLS TN7000000044030

Well #: 14700006
Total Depth: 140
Quad #: 0309SW8
Casing Depth: 46
Intended Well Use: Residential

License Code: 248
Est Yield: 2
Driller Tag #: Not Reported
Depth to Water: 105

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

B10
WSW
1 - 2 Miles
Higher

TN WELLS TN7000000044791

Well #: 14700774
Total Depth: 40
Quad #: 0309SW8
Casing Depth: 25
Intended Well Use: Other

License Code: 497
Est Yield: 5
Driller Tag #: Not Reported
Depth to Water: 30

C11
East
1 - 2 Miles
Lower

TN WELLS TN7000000080948

Well #: 16508027
Total Depth: 0
Quad #: 0309SW9
Casing Depth: 0
Intended Well Use: Not Reported

License Code: 740
Est Yield: 2
Driller Tag #: Not Reported
Depth to Water: 0

C12
East
1 - 2 Miles
Higher

TN WELLS TN7000000080946

Well #: 16508025
Total Depth: 0
Quad #: 0309SW9
Casing Depth: 0
Intended Well Use: Not Reported

License Code: 740
Est Yield: 4
Driller Tag #: Not Reported
Depth to Water: 0

13
ENE
1 - 2 Miles
Higher

TN WELLS TN7000000044985

Well #: 20054403
Total Depth: 340
Quad #: 0309SW6
Casing Depth: 41
Intended Well Use: Commercial

License Code: 756
Est Yield: 0
Driller Tag #: D0074428
Depth to Water: 0

14
SE
1 - 2 Miles
Higher

TN WELLS TN7000000080947

Well #: 16508026
Total Depth: 0
Quad #: 0309SW9

License Code: 740
Est Yield: 0
Driller Tag #: Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Casing Depth: 0
Intended Well Use: Residential

Depth to Water: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

State Database: TN Radon

Radon Test Results

County	Total Sites	Avg	Max	<4 pCi/L	4-10 pCi/L	10-20 pCi/L	20-50 pCi/L	50-100 pCi/L	>100 pCi/L
ROBERTSON	29	3.1	18.8	22	4	3	0	0	0

Federal EPA Radon Zone for ROBERTSON County: 2

Note: Zone 1 indoor average level > 4 pCi/L.

: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.

: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for ROBERTSON COUNTY, TN

Number of sites tested: 7

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.914 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	1.800 pCi/L	75%	25%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2008. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-338-2827

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory

Source: Department of Environment & Conservation

Telephone: 651-532-0052

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Belkman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

County Water Wells in Tennessee

Source: Department of Environment and Conservation

Telephone: 615-532-0160

Water well locations for the entire state.

OTHER STATE DATABASE INFORMATION

RADON

State Database: TN Radon

Source: Department of Environment & Conservation

Telephone: 615-299-9725

Radon Test Results

Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6856

Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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**Domestic Well Survey Report
Inactive Treatment Lagoon
Cross Plains, Robertson County, Tennessee
TTL Project No. 000190803199.00**

ATTACHMENT D

**TDWR DATABASE
SPREADSHEET**

LAT	LONG	land num	used name	used rft	well num	owner name	unplif. date	cmptlin	est length	est casing	test	finsh type	quantity	ballance	accuracy	license co	county	national	other	add. line
36.612778	-86.70889	0306SW	ORLINDA	1	14700077	MOTT R	7/24/1984 0:00	60	5	32	0	Good	363546	S		246	ROBERTSON			
36.613056	-86.70889	0306SW	ORLINDA	1	14700078	MOTT R	7/24/1984 0:00	90	3	0	0	Bad	363547	S		246	ROBERTSON			
36.595278	-86.70944	0306SW	ORLINDA	1	14700081	DIXON M	5/1/1988 0:00	408		36			363507	S		751	ROBERTSON			
36.593333	-86.70833	0306SW	ORLINDA	1	14700828	EDDY, J D	2/18/1988 0:00	65	20	20	Open Hole	Good	363500			658	ROBERTSON			LAQUIN
36.593333	-86.70833	0306SW	ORLINDA	1	14700827	WILKINSON, LANNY	2/18/1988 0:00	145	30	54	Open Hole	Good	363500			658	ROBERTSON			LAQUIN
36.593333	-86.70833	0306SW	ORLINDA	1	14700828	WILKINSON, LANNY	2/18/1988 0:00	80	30	40	Open Hole	Good	363500			658	ROBERTSON			LAQUIN
36.593333	-86.70833	0306SW	ORLINDA	1	14700829	HICARIN, JOE D	2/18/1988 0:00	140	10	74	Open Hole	Good	363500			658	ROBERTSON			LAQUIN
36.593333	-86.70833	0306SW	ORLINDA	1	14700829	HICARIN, JOE D	2/18/1988 0:00	75	100	36	Open Hole	Good	363500			740	ROBERTSON			
36.593333	-86.70833	0306SW	ORLINDA	1	14700829	HICARIN, JOE D	2/18/1988 0:00	122	3	51	Open Hole	Good	363500			417	SUMNER			HUNTER
36.593333	-86.70833	0306SW	ORLINDA	1	16501653	CATHCART, CLIFTON	8/31/2012 0:00	126	7	28	Open Hole	Clear	363705			756	ROBERTSON			6194 S L
36.618056	-86.74333	0306SW	ORLINDA	1	20122292	MUELLER, LAIR	7/19/2015 0:00	285	0.5	41	Open Hole	Clear	363623			756	ROBERTSON			8224 S L
36.608369	-86.71167	0306SW	ORLINDA	1	20151248	SEARCY, RONALD	11/16/2015 0:00	240	4	41	Open Hole	Clear	363603			191	ROBERTSON			5552 DK
36.594167	-86.70944	0306SW	ORLINDA	1	20161052	FERRIS, ALFRED	5/9/2017 0:00	60	6	41	Open Hole	Mudshy	363548			956	ROBERTSON			8871 HW
36.596667	-86.72944	0306SW	ORLINDA	1	20170813	STARK, BRYANT	7/17/1984 0:00	110	0	0			363655	S		240	ROBERTSON			
36.615278	-86.70556	0306SW	ORLINDA	2	14700079	MOTT R	7/24/1984 0:00	85	5	23			363546	S		310	ROBERTSON			
36.596933	-86.69661	0306SW	ORLINDA	2	14700161	DUNN D	12/8/1985 0:00	85	10	50	Open Hole	Good	363500			15	ROBERTSON			
36.593333	-86.69667	0306SW	ORLINDA	2	20100787	BARNETT, KEITH	5/18/1984 0:00	95	15	70	Open Hole	Clear	363506	F		756	ROBERTSON			9100 PLE
36.595000	-86.69661	0306SW	ORLINDA	2	20032386	GRESHAM, FRANCIS	9/5/2003 0:00	125	15	50	Open Hole	Clear	363506	F		756	ROBERTSON			7586 CLJ
36.60167	-86.70722	0306SW	ORLINDA	2	20121932	EDEN, RONALD	7/28/2012 0:00	145	50	27	Open Hole	Clear	363603			756	ROBERTSON			7708 CLJ
36.612500	-86.69778	0306SW	ORLINDA	2	20150735	BERNARD, DANNY	4/27/2015 0:00	80	25	40	Open Hole	Clear	363645			756	ROBERTSON			7708 CLJ
36.612500	-86.69778	0306SW	ORLINDA	2	20160736	BERNARD, DANNY	4/27/2015 0:00	85					363645			756	ROBERTSON			7708 CLJ
36.603611	-86.65278	0306SW	ORLINDA	3	14700123	EVANS B	6/23/1985 0:00	100	2	56			363613	S		310	ROBERTSON			
36.605000	-86.64028	0306SW	ORLINDA	3	14700176	MOORE A	12/15/1985 0:00	125	5	56			363618	S		310	ROBERTSON			
36.599056	-86.63778	0306SW	ORLINDA	3	14700186	GROVES J	3/22/1986 0:00	100	10	36			363517	S		310	ROBERTSON			
36.593333	-86.63778	0306SW	ORLINDA	3	14700187	WILKS R	3/18/1986 0:00	77	22	22			363517	S		310	ROBERTSON			
36.611389	-86.66222	0306SW	ORLINDA	3	14700391	GAMMON, ROBERT A	12/15/1970 0:00	220	3	23			363641	S		310	ROBERTSON			
36.594444	-86.63361	0306SW	ORLINDA	3	14700880	STARKS R O	2/25/1978 0:00	145	30	56			363540	S		317	ROBERTSON			PAYNE R
36.593333	-86.70167	0306SW	ORLINDA	3	14700816	HAGNEY, RANDY	8/11/1987 0:00	66	18	57	Open Hole	Good	363500			646	ROBERTSON			PAYNE R
36.593333	-86.625	0306SW	ORLINDA	3	14700824	VAUGHN, RANDELL	1/14/1988 0:00	70	8	42	Open Hole	Good	363500			646	ROBERTSON			PAYNE R
36.617222	-86.61722	0306SW	ORLINDA	3	20064234	RAYBURN, BEN & ANGIE	9/6/2006 0:00	125	10	55	Open Hole	Clear	363702			754	ROBERTSON			5798 BILL
36.57500	-86.71639	0306SW	ORLINDA	4	14700594	BALDWIN W L	11/28/1973 0:00	83	5	22			363439	S		497	ROBERTSON			
36.567500	-86.72028	0306SW	ORLINDA	4	14700706	ANDERSON P	4/30/1977 0:00	125	4	40			363403	S		317	ROBERTSON			
36.565000	-86.71889	0306SW	ORLINDA	4	14700708	HARDCASTLE D W	5/7/1977 0:00	80					363318	S		317	ROBERTSON			
36.567778	-86.71889	0306SW	ORLINDA	4	14708001	KLGORE SPR RM-1-S							363318	S		317	ROBERTSON			
36.561389	-86.74722	0306SW	ORLINDA	4	20051503	ROBINSON, RICK	6/3/2005 0:00	43	10	27			363318	S		317	ROBERTSON			HENRY F
36.333333	-86.74722	0306SW	ORLINDA	4	94004008	TOHNSONS CABINET	10/18/1994 0:00	65	10	45			363318	S		317	ROBERTSON			
36.565000	-86.70369	0306SW	ORLINDA	5	14700709	GOOSTREE M	7/4/2002 0:00	250	10	62	Open Hole	Good	363308	F		647	ROBERTSON			4604 E F
36.562222	-86.69667	0306SW	ORLINDA	5	20022300	BIRDWELL, WAYNE	4/21/1976 0:00	83	20	45			363308	F		647	ROBERTSON			8095 CEL
36.560833	-86.68078	0306SW	ORLINDA	5	20060436	KENNEDY, JOHN	12/10/2005 0:00	140	20	41	Open Hole	Clear	363303	F		756	ROBERTSON			8095 CEL
36.561111	-86.6975	0306SW	ORLINDA	5	20060437	KENNEDY, JOHN	12/10/2005 0:00	86	5	25	Open Hole	Clear	363306	F		756	ROBERTSON			8095 CEL
36.560000	-86.63472	0306SW	ORLINDA	6	20030341	ARTHUR, RAY	9/23/2000 0:00	160	3	37	Open Hole	Clear	363308	F		756	ROBERTSON			8095 CEL
36.562222	-86.68556	0306SW	ORLINDA	6	20031019	LEGROS, MIKE	1/8/2003 0:00	140	12	20	Open Hole	Clear	363308	F		756	ROBERTSON			8095 CEL
36.543611	-86.6375	0306SW	ORLINDA	6	20064403	GARROTT, JOHNNY	10/9/2005 0:00	340	0	41	Open Hole	Clear	363237	F		756	ROBERTSON			8095 GUT
36.599167	-86.61056	0306SW	ORLINDA	6	20080360	BREWER, JEFF	12/17/2008 0:00	250	4	21	Open Hole	Clear	363067	F		191	ROBERTSON			8095 GUT
36.562222	-86.64333	0306SW	ORLINDA	6	20161276	EDDINGS, DAVID	6/28/2016 0:00	205	0.5	41	Spotted	Clarity	363308			561	ROBERTSON			9027 BYF
36.563333	-86.71194	0306SW	ORLINDA	6	95001003	ROBINSON, BURLEY	3/10/1995 0:00	410	6	41	Open Hole	Unknown	363112	S		561	ROBERTSON			4623 WFL
36.524444	-86.71194	0306SW	ORLINDA	7	14700464	KILLER M	7/8/1971 0:00	100	100	39			363112	S		191	ROBERTSON			4623 WFL
36.502278	-86.73111	0306SW	ORLINDA	7	14700459	BALDWIN S	10/8/1971 0:00	120	22	22			363001	S		191	ROBERTSON			4623 WFL
36.571389	-86.70444	0306SW	ORLINDA	7	20053760	SLOAN, STEVE	9/19/2005 0:00	240	2	46			363001	S		191	ROBERTSON			4623 WFL
36.571389	-86.70444	0306SW	ORLINDA	7	20061047	KING, BETTY	3/15/2006 0:00	22	2	42			363417	F		725	ROBERTSON			1551 SPF
36.598333	-86.7425	0306SW	ORLINDA	7	20102589	DRABEK, JERRY	10/15/2010 0:00	300	2	2			363218	F		647	DAVIDSON			4142 ORI
36.520100	-86.72	0306SW	ORLINDA	7	97000761	FRENDSLY, BILL	12/9/1986 0:00	250	2	62	Open Hole	Unknown	363112	S		191	ROBERTSON			4142 ORI
36.593333	-86.73333	0306SW	ORLINDA	7	99000665	HICKMAN, M E	9/27/1986 0:00	91	100	39			363112	S		191	ROBERTSON			4142 ORI
36.523811	-86.69472	0306SW	ORLINDA	8	14700005	JERNIGAN A	1/18/1963 0:00	140	2	46			363115	S		246	ROBERTSON			3638 CRK
36.523811	-86.7025	0306SW	ORLINDA	8	14700167	JARRISON B	10/15/1965 0:00	60	6	24			363109	S		246	ROBERTSON			
36.523811	-86.7025	0306SW	ORLINDA	8	14700582	COVINGTON L.H.	10/12/1973 0:00	100	10	37			363151	S		317	ROBERTSON			
36.527778	-86.68369	0306SW	ORLINDA	8	14700767	JERNIGAN M	5/4/1980 0:00	55	10	40			363122	S		497	ROBERTSON			
36.527778	-86.68369	0306SW	ORLINDA	8	14700767	JERNIGAN M	5/4/1980 0:00	40	5	25			363119	S		497	ROBERTSON			
36.525278	-86.70472	0306SW	ORLINDA	8	20181876	SANDLER, MIKE	9/14/2016 0:00	60	5	38	Open Hole	Clear	363131			756	ROBERTSON			4443 ORR
36.525278	-86.70472	0306SW	ORLINDA	8	20181876	SANDLER, MIKE	9/14/2016 0:00	105	2	41	Open Hole	Good	363142			756	ROBERTSON			4443 ORR
36.534167	-86.63684	0306SW	ORLINDA	9	14700681	LANE N.H.	4/18/1975 0:00	45	1	21			363203	S		94	ROBERTSON			4221 JEF
36.500000	-86.625	0306SW	ORLINDA	9	16501389	GHINES, LEE	5/25/1983 0:00	165	1	21	Open Hole	Good	363200			561	SUMNER			HWY 25
36.500000	-86.625	0306SW	ORLINDA	9	16501389	GHINES, LEE	5/25/1983 0:00	100	2	21	Open Hole	Good	363200			561	SUMNER			OLD MT
36.534444	-86.63369	0306SW	ORLINDA	9	16508025	WRIGHT SPRING	11/17/1985 0:00	100	4				363204	S		566	SUMNER			
36.511389	-86.64111	0306SW	ORLINDA	9	16506026	CEDARCREST SPRING							363204	S		566	SUMNER			
36.535000	-86.63411	0306SW	ORLINDA	9	16508027	MUCKY SPRING							363204	S		566	SUMNER			
36.500000	-86.63411	0306SW	ORLINDA	9	20053500	GHINES, CHRIS	8/13/2005 0:00	98	5	46	Open Hole	Clear	363206	F		740	SUMNER			
36.502278	-86.65139	0306SW	ORLINDA	9	20121834	DAY, THOMAS E	7/27/2012 0:00	145</												

LAT	LONG	quad num	quad name	quad nft	well number	owner name	cm min date	cm min east casing	low fresh type	quality	latitude	accuracy	license
38.261389	-86.606867	0308SE	PORTLAND	1	14700383	BROWN J	4/28/1970 0:00	3	39	Good	36.3641	S	19 ROBERTSON
38.27055556	-86.61361111	0308SE	PORTLAND	1	14700408	SCOTT B C	3/8/1971 0:00	1	46	Bad	36.3614	S	98 ROBERTSON
38.27277778	-86.62055556	0308SE	PORTLAND	1	14700504	SHOCKNEY N	6/22/1971 0:00	15	40	Good	36.3622	S	317 ROBERTSON
38.27055556	-86.61361111	0308SE	PORTLAND	1	14700544	SCOTT B C	10/10/1972 0:00	0	20		36.3614	S	191 ROBERTSON
38.25	-86.58333333	0308SE	PORTLAND	1	16501477	NICHOLSON, JIM	12/18/1984 0:00	75	10	Open Hole	36.3500		548 SUMNER
38.25	-86.58333333	0308SE	PORTLAND	1	16501543	WRIGHT, NOKES	7/24/1985 0:00	125	3	Open Hole	36.3500		191 SUMNER
38.25	-86.58333333	0308SE	PORTLAND	1	16501550	BENNETT, WILLIAM	11/1/1985 0:00	80	5	Open Hole	36.3500		549 SUMNER
38.25	-86.58333333	0308SE	PORTLAND	1	16501725	GRAHAM, PHILIP	8/1/1988 0:00	105	20	Open Hole	36.3500		488 SUMNER
38.25	-86.58333333	0308SE	PORTLAND	1	16501725	GRAHAM, PHILIP	8/1/1988 0:00	55	0		36.3500		488 SUMNER
38.2525	-86.59416667	0308SE	PORTLAND	1	16500834	BLUMIN, BRANCH SPRING	3/28/2001 0:00	675		Good	36.3509	S	740 SUMNER
38.27272222	-86.61472222	0308SE	PORTLAND	1	20011946	ANDERSON, ROGER	5/8/2017 0:00	200		Clear	36.3621	F	191 ROBERTSON
38.27272222	-86.625	0308SE	PORTLAND	1	20170812	SEARCY, TREVOR	5/8/2017 0:00	300		Open Hole	36.3620		D0042577
38.27272222	-86.62055556	0308SE	PORTLAND	1	20170814	SEARCY, TREVOR	5/8/2017 0:00	160		Open Hole	36.3620		D006560
38.26527778	-86.58611111	0308SE	PORTLAND	1	20181682	MCFADEN, ALLEN	9/11/2018 0:00	50		Clear	36.3620		D006560
38.261389	-86.58333333	0308SE	PORTLAND	1	16500278	ELLIS WATTS DEV CO	6/14/1985 0:00	165	1	Open Hole	36.3545		1014 SUMNER
38.26194444	-86.575	0308SE	PORTLAND	2	16500028	CLUBBS W	4/17/1984 0:00	100	42		36.3656	S	647 ROBERTSON
38.27333333	-86.58027778	0308SE	PORTLAND	2	16500043	CHANDLER W	6/31/1984 0:00	75	3	Good	36.3624	S	251 SUMNER
38.27333333	-86.58027778	0308SE	PORTLAND	2	16500043	LANE R	8/29/1984 0:00	95	20	Good	36.3508	S	55 SUMNER
38.27333333	-86.58027778	0308SE	PORTLAND	2	16500109	BAKER J A	7/12/1985 0:00	0	0	Good	36.3633	S	740 SUMNER
38.27333333	-86.58027778	0308SE	PORTLAND	2	16500164	MAGANEE E	12/3/1986 0:00	100	20	Good	36.3633	S	310 SUMNER
38.27333333	-86.58027778	0308SE	PORTLAND	2	16500212	HOLLAND CHARLES	11/8/1988 0:00	80	30	Good	36.3625	S	710 SUMNER
38.27333333	-86.58027778	0308SE	PORTLAND	2	16500322	MAZANEC R	10/24/1989 0:00	118	10	Good	36.3633	S	277 SUMNER
38.27333333	-86.58027778	0308SE	PORTLAND	2	16500431	TURNER WALLACE L	6/14/1985 0:00	55	42	Good	36.3525	S	32 SUMNER
38.26833333	-86.57027778	0308SE	PORTLAND	2	16500448	ENGLAND B	8/10/1970 0:00	70	15	Good	36.3606	S	98 SUMNER
38.27333333	-86.58333333	0308SE	PORTLAND	2	16500456	GREGORY RALPH	7/30/1970 0:00	80	5	Unknown	36.3633	S	98 SUMNER
38.27333333	-86.58333333	0308SE	PORTLAND	2	16500462	JOHNSON R	8/10/1970 0:00	70	2	Good	36.3553	S	98 SUMNER
38.27333333	-86.58333333	0308SE	PORTLAND	2	16500468	BAKER R E	8/25/1970 0:00	95	30	Good	36.3507	S	98 SUMNER
38.25194444	-86.58916667	0308SE	PORTLAND	2	16500488	HOBBY O	12/1/1970 0:00	70	3	Good	36.3510	S	98 SUMNER
38.25277778	-86.54361111	0308SE	PORTLAND	2	16500490	HOBBY O	11/8/1970 0:00	100	1	Good	36.3509	S	98 SUMNER
38.2525	-86.54194444	0308SE	PORTLAND	2	16500509	TUNNEY E	6/5/1970 0:00	58	10	Good	36.3525	S	277 SUMNER
38.25694444	-86.56527778	0308SE	PORTLAND	2	16500528	BRUNTIN C	3/12/1971 0:00	120	4	Good	36.3501	S	98 SUMNER
38.25027778	-86.54627778	0308SE	PORTLAND	2	16500535	CRABTREE E	4/8/1971 0:00	75	20	Good	36.3509	S	471 SUMNER
38.2525	-86.55777778	0308SE	PORTLAND	2	16500538	MC DONALD H	3/15/1971 0:00	80	20	Good	36.3501	S	471 SUMNER
38.25222222	-86.57416667	0308SE	PORTLAND	2	16500537	BAKER M	3/15/1971 0:00	80	20	Good	36.3508	S	740 SUMNER
38.2516067	-86.57444444	0308SE	PORTLAND	2	16500594	HOBBY J	8/20/1971 0:00	120	20	Good	36.3508	S	98 SUMNER
38.25905556	-86.58694444	0308SE	PORTLAND	2	16500613	BREWSTER C	10/21/1971 0:00	170	1	Good	36.3520	S	98 SUMNER
38.25194444	-86.58	0308SE	PORTLAND	2	16500803	LANE R	3/8/1973 0:00	94	6	Good	36.3507	S	55 SUMNER
38.25	-86.54188887	0308SE	PORTLAND	2	16501401	MC GREGORY, JERRY	7/11/1963 0:00	96	15	Open Hole	36.3500		549 SUMNER
38.25	-86.54188887	0308SE	PORTLAND	2	16501720	HUFF, TOM	7/20/1988 0:00	61	8	Open Hole	36.3519	S	646 SUMNER
38.25277778	-86.5525	0308SE	PORTLAND	2	16500802	UNKNOWN#51		50		Unknown	36.3531	S	740 SUMNER
38.25681111	-86.54611111	0308SE	PORTLAND	2	16508033	UNKNOWN#52		2		Good	36.3531	S	740 SUMNER
38.26277778	-86.59447222	0308SE	PORTLAND	2	20090366	COLE, THERESA	12/16/2006 0:00	100	5	Open Hole	36.3734		D003764
38.26833333	-86.55777778	0308SE	PORTLAND	2	20162356	TDOT	10/27/2016 0:00	36		Clear	36.3718		222 SUMNER
38.33333333	-86.54444444	0308SE	PORTLAND	2	91000117	BLACKBURN, BOBBY	12/14/1980 0:00	78	20	Good			549 SUMNER
38.33333333	-86.54444444	0308SE	PORTLAND	2	91000117	BLACKBURN, BOBBY	12/14/1980 0:00	78	20	Good			549 SUMNER
38.33333333	-86.54444444	0308SE	PORTLAND	2	92001224	KYLE, GLEN D	3/3/1982 0:00	175	6	Open Hole			650 SUMNER
38.33333333	-86.54444444	0308SE	PORTLAND	2	94004588	NO NAME	11/5/1994 0:00	100	10	Good			568 SUMNER
38.33333333	-86.54444444	0308SE	PORTLAND	2	96005349	SNOW, JOHN	11/18/1986 0:00	270	1	Open Hole			647 SUMNER
38.26444444	-86.56894444	0308SE	PORTLAND	2	98000016	CITY OF PORTLAND	12/11/1987 0:00	201	200	Open Hole	36.3704	S	D001675
38.27222222	-86.54027778	0308SE	PORTLAND	3	16500138	MCCOIN B	11/5/1984 0:00	65	1	Good	36.3620	S	D002768
38.27063333	-86.53861111	0308SE	PORTLAND	3	16500139	PARKER E	10/15/1984 0:00	50	1	Good	36.3615	S	273 SUMNER
38.275	-86.5125	0308SE	PORTLAND	3	16500269	PALMER F	5/8/1988 0:00	72	1	Good	36.3630	S	55 SUMNER
38.27055556	-86.53777778	0308SE	PORTLAND	3	16500477	LEE O	10/7/1970 0:00	48	48	Good	36.3614	S	55 SUMNER
38.33333333	-86.53777778	0308SE	PORTLAND	3	165000515	TROUTT B	11/18/1971 0:00	110	34	Good	36.3614	S	471 SUMNER
38.27722222	-86.53772222	0308SE	PORTLAND	3	16500800	CHIFFIN B	9/27/1971 0:00	95	91	Good	36.3638	S	98 SUMNER
38.25	-86.5	0308SE	PORTLAND	3	16501659	STOKES CO M R	7/15/1987 0:00	173	5	Open Hole	36.3500		55 SUMNER
38.25	-86.5	0308SE	PORTLAND	3	16501738	STREET, EDDIE	9/22/1988 0:00	130	10	Open Hole	36.3500		488 SUMNER
38.26866667	-86.51722222	0308SE	PORTLAND	3	20010128	ALBANY INTERNATIONAL	12/16/2000 0:00	305	62	Open Hole	36.3600		647 SUMNER
38.265	-86.51722222	0308SE	PORTLAND	3	90002480	STEWART, ROY	7/18/1980 0:00	210	6	Open Hole	36.3708	F	D006237
38.33333333	-86.51722222	0308SE	PORTLAND	3	92003612	JR FOOD MART	4/15/1982 0:00	16		Screen			561 SUMNER
38.33333333	-86.51722222	0308SE	PORTLAND	3	92003612	JR FOOD MART	4/15/1982 0:00	16		Screen			561 SUMNER
38.33333333	-86.51722222	0308SE	PORTLAND	3	92003612	JR FOOD MART	4/15/1982 0:00	16		Screen			561 SUMNER
38.33333333	-86.51722222	0308SE	PORTLAND	3	92003612	JR FOOD MART	4/15/1982 0:00	16		Screen			561 SUMNER
38.2625	-86.51866667	0308SE	PORTLAND	3	98000009	CITY OF PORTLAND	12/10/1987 0:00	301	27				571 SUMNER
38.26277778	-86.51864444	0308SE	PORTLAND	3	98000010	CITY OF PORTLAND	12/11/1987 0:00	281	24				571 SUMNER
38.26063333	-86.51864444	0308SE	PORTLAND	3	98000010	CITY OF PORTLAND	12/11/1987 0:00	142	2	Open Hole	36.3546	S	571 SUMNER
38.22555556	-86.51866667	0308SE	PORTLAND	4	14708002	SOMERVILLE BR SPR	12/11/1987 0:00	73		Open Hole	36.3532	S	740 ROBERTSON
38.24638889	-86.62288889	0308SE	PORTLAND	4	14708003	ROCK HOUSE SPRING		730		Good	36.3447	S	740 ROBERTSON

38.24	-86.54688889	0308SE	PORTLAND	5	16500976	BOWER J W	10/9/1975 0:00	94	10	21	Bad	363424	S	98 SUMNER
38.23777778	-86.54722222	0308SE	PORTLAND	5	16500978	COLLINS W	9/15/1975 0:00	145	1	34	Bad	363416	S	740 SUMNER
38.2175	-86.57177778	0308SE	PORTLAND	5	16500983	LAMBERTH W	8/8/1975 0:00	95	2	21	Good	363303	S	95 SUMNER
38.2125	-86.575	0308SE	PORTLAND	5	16501068	LAMBERTH W R	9/13/1976 0:00	70	20	27	Good	363245	S	98 SUMNER
38.23911111	-86.54555556	0308SE	PORTLAND	5	16501570	HOOGUE VICTOR	9/13/1976 0:00	90	20	77	Slotted	363410	F	598 SUMNER
38.20633333	-86.54166667	0308SE	PORTLAND	5	16501600	WILLIAMS, RAYMOND	8/18/1986 0:00	125	3	41	Open Hole	363230		191 SUMNER
38.16666667	-86.375	0308SE	PORTLAND	5	16501814	KIRKLIN ROBIN	5/24/1986 0:00	200	1	45	Open Hole	363000		181 SUMNER
38.20633333	-86.54166667	0308SE	PORTLAND	5	16501768	THOMPSON, JACKIE	5/24/1986 0:00	45	35	24	Open Hole	363230	S	648 SUMNER
38.22777778	-86.54277778	0308SE	PORTLAND	5	16500828	UNKNOWN#49	4/20/1988 0:00		4					740 SUMNER
38.22722222	-86.54306667	0308SE	PORTLAND	5	16500830	CRUSHER SPRING			900					740 SUMNER
38.22166667	-86.5725	0308SE	PORTLAND	5	16500835	SEARCY SPRING			8					740 SUMNER
38.24722222	-86.57	0308SE	PORTLAND	5	20013214	AVRIT, CLIFFORD S	8/5/2001 0:00	110	4	20	Open Hole	363318	S	740 SUMNER
38.23416667	-86.57083333	0308SE	PORTLAND	5	20030284	AVRIT, CLIFF	12/16/2002 0:00	97						222 SUMNER
38.25055556	-86.51094444	0308SE	PORTLAND	5	20034977	CANTRELL, TOMMY	9/16/2004 0:00	85	65	41	Slotted	363403		756 SUMNER
38.24916667	-86.41805556	0308SE	PORTLAND	5	20083104	DILLARD, ERNIE	6/12/2008 0:00	200	7	47	Open Hole	363457		647 SUMNER
38.2326	-86.57055556	0308SE	PORTLAND	5	20064235	KIRBY, STEVEN	8/8/2006 0:00	165	17	41	Open Hole	363357		756 SUMNER
38.2326	-86.57055556	0308SE	PORTLAND	5	20084237	KIRBY, STEVEN	5/20/2011 0:00	300	1	28	Open Hole	363357		756 SUMNER
38.22722222	-86.55416667	0308SE	PORTLAND	5	20111078	ARTHUR, ALLEN	8/12/1991 0:00	110	40	43	Open Hole	363320		222 SUMNER
-58.33333333	143.33333333	0308SE	PORTLAND	5	91002063	MCCOIGNS, ROBERT	6/12/1991 0:00	110	10	35	Open Hole			549 SUMNER
-58.33333333	143.33333333	0308SE	PORTLAND	5	91003137	PATTON, LARY	8/7/1991 0:00	80	7	41	Open Hole			546 SUMNER
-58.33333333	143.33333333	0308SE	PORTLAND	5	92000325	ALONSO, PETER	9/17/1991 0:00	74	7	25	Open Hole			648 SUMNER
-58.33333333	143.33333333	0308SE	PORTLAND	5	92000684	STREET, EDDIE	10/31/1991 0:00	200	0	28	Open Hole			561 SUMNER
38.25	-86.38333333	0308SE	PORTLAND	5	92002348	BURROW, BOBBY	2/4/1992 0:00	127	4	25	Open Hole			648 SUMNER
38.20633333	-86.54166667	0308SE	PORTLAND	5	93005202	ADCOCK, MITCHELL	8/20/1992 0:00	130	10	50	Open Hole	363500		568 SUMNER
-58.33333333	143.33333333	0308SE	PORTLAND	5	94003874	BOWLES, DEAN	12/8/1993 0:00	58	15	33	Open Hole	363230		648 SUMNER
38.22666667	-86.55277778	0308SE	PORTLAND	5	95001209	HOLLON, SHIRLEY	9/23/1994 0:00	105	3	27	Open Hole			000552
38.22686667	-86.55222222	0308SE	PORTLAND	5	95001210	HOLLON, SHIRLEY	3/7/1995 0:00	50	10	21	Good	363336	F	647 SUMNER
38.22683333	-86.56111111	0308SE	PORTLAND	5	95001211	ROBERTS, WAYNE	3/8/1995 0:00	65	10		Good	363336	F	001125
-58.33333333	143.33333333	0308SE	PORTLAND	5	95001268	JENNIGAN, DARRELL	3/24/1995 0:00	60	5	33	Slotted	363333	F	001125
-58.33333333	143.33333333	0308SE	PORTLAND	5	95003446	PAYTON III, WILLIAM	11/16/1996 0:00	105	10	41	Open Hole			000554
38.22666667	-86.55386667	0308SE	PORTLAND	5	TN015831	HALLON, SHIRLEY								647 SUMNER
-58.33333333	143.33333333	0308SE	PORTLAND	6	16500728	PEERATT G	9/7/1972 0:00	150	3	20	Good	363336	F	740 SUMNER
38.24666667	-86.53222222	0308SE	PORTLAND	6	16500731	DYKE W B	8/28/1973 0:00	170	3	28	Good	363448	S	191 SUMNER
38.24444444	-86.50916667	0308SE	PORTLAND	6	16500801	WILKS G	3/13/1973 0:00	135	4	26	Good	363328	S	56 SUMNER
38.2425	-88.51866667	0308SE	PORTLAND	6	16501296	FLEET DESIGN AND ENG	8/23/1978 0:00	50	13	21	Bad	363433	S	191 SUMNER
38.20633333	-88.5	0308SE	PORTLAND	6	16501449	CATCHEART, CLIFTON	8/7/1984 0:00	150	25	54	Open Hole	363230		18 SUMNER
38.20633333	-88.5	0308SE	PORTLAND	6	16501494	SHRUM, RUDOLPH	5/10/1985 0:00	45	10	30	Open Hole	363230		497 SUMNER
38.20633333	-88.5	0308SE	PORTLAND	6	16501595	BEST, CHARLES	2/20/1986 0:00	98	8	44	Open Hole	363230		18 SUMNER
38.20633333	-88.5	0308SE	PORTLAND	6	16501598	FOWLER, LAWRENCE	7/30/1986 0:00	75		31	Open Hole	363230		191 SUMNER
38.16666667	-86.54166667	0308SE	PORTLAND	6	16501637	SMITH, MICHAEL	4/8/1987 0:00	100	4	41	Open Hole	363230		191 SUMNER
38.20633333	-88.5	0308SE	PORTLAND	6	16501646	MORGAN, KEITH	5/28/1987 0:00	70	10	37	Open Hole	363000		468 SUMNER
38.20633333	-88.5	0308SE	PORTLAND	6	16501646	CRUTCHER, RANDY	9/20/1987 0:00	80	10	23	Open Hole	363230		468 SUMNER
38.20633333	-88.5	0308SE	PORTLAND	6	16501670	CLOUSE, GLEN	9/8/1987 0:00	61	3	45	Open Hole	363230		648 SUMNER
38.20633333	-88.5	0308SE	PORTLAND	6	16501717	GRAHAM, KENNETH	7/18/1988 0:00	100	0	22	Open Hole	363230		468 SUMNER
38.20633333	-86.51611111	0308SE	PORTLAND	6	16501723	GRAHAM, KENNETH	7/23/1988 0:00	50	10	33	Open Hole	363230		568 SUMNER
38.20633333	-86.5	0308SE	PORTLAND	6	16501728	BRADLEY, KERRY	8/9/1988 0:00	70	18	30	Open Hole	363230		568 SUMNER
38.20633333	-88.5	0308SE	PORTLAND	6	16501730	BRADLEY, AUBREY	8/5/1988 0:00	77	120	10	Good	363136	S	740 SUMNER
38.22722222	-88.54111111	0308SE	PORTLAND	6	16508031	NICE SPRING								000541
38.26666667	-86.5175	0308SE	PORTLAND	6	20011705	ALBANY INTERNATIONAL	5/19/2001 0:00	100	10	41	Open Hole	363600		647 SUMNER
38.22666667	-86.52333333	0308SE	PORTLAND	6	20053501	DOONOH, J B	8/17/2005 0:00	540	7	38	Open Hole	363341	F	0007231
38.23166667	-86.50333333	0308SE	PORTLAND	6	20064828	WILCOX, KIM	11/27/2008 0:00	240						756 SUMNER
38.23111111	-86.53916667	0308SE	PORTLAND	6	2010752	KEY, DANNY	3/31/2011 0:00	180	0	41	Open Hole	363352		647 SUMNER
38.24222222	-86.51416667	0308SE	PORTLAND	6	20180948	APEX COMPANY	5/21/2018 0:00	20						1014 SUMNER
38.24194444	-86.51611111	0308SE	PORTLAND	6	20180948	APEX COMPANY	5/21/2018 0:00	20						1014 SUMNER
38.24194444	-86.51611111	0308SE	PORTLAND	6	20180950	APEX COMPANY	5/21/2018 0:00	20						1014 SUMNER
38.24222222	-86.51611111	0308SE	PORTLAND	6	20180951	APEX COMPANY	5/21/2018 0:00	20						1014 SUMNER
38.24222222	-86.51611111	0308SE	PORTLAND	6	20180952	APEX COMPANY	4/19/2018 0:00	20						1014 SUMNER
38.24222222	-86.51611111	0308SE	PORTLAND	6	20180953	APEX COMPANY	4/19/2018 0:00	20						1014 SUMNER
38.24194444	-86.51611111	0308SE	PORTLAND	6	20180954	APEX COMPANY	4/19/2018 0:00	20						1014 SUMNER
38.24194444	-86.51611111	0308SE	PORTLAND	6	20180955	APEX COMPANY	4/19/2018 0:00	20						1014 SUMNER
38.24194444	-86.51611111	0308SE	PORTLAND	6	20180956	APEX COMPANY	4/19/2018 0:00	20						1014 SUMNER
38.24222222	-86.51611111	0308SE	PORTLAND	6	20180957	APEX COMPANY	4/19/2018 0:00	20						1014 SUMNER
38.24222222	-86.51611111	0308SE	PORTLAND	6	20180958	APEX COMPANY	4/19/2018 0:00	20						1014 SUMNER
38.24222222	-86.51611111	0308SE	PORTLAND	6	20180978	APEX COMPANY	4/19/2018 0:00	20						638 SUMNER
38.24222222	-86.51611111	0308SE	PORTLAND	6	92001554	EDISON, RAY DEAN	4/18/1992 0:00	66	20	28	Open Hole	363432		646 SUMNER
-58.33333333	143.33333333	0308SE	PORTLAND	6	93001283	MATHERSON, WARNER	3/28/1993 0:00	113	8	54	Open Hole			549 SUMNER

38.16868687	-86.56333333	0308SE	PORTLAND	7	16501750	DURETT, EARNEST	7/8/1988 0:00	95	7	20	Open Hole	Good	363000	191 SUMMER
38.18027778	-86.56811111	0308SE	PORTLAND	7	20041680	KNIGHT, NATHAN	5/19/2004 0:00	100	5	28	Open Hole	Clear	363049	222 SUMMER
38.21416667	-86.86555556	0308SE	PORTLAND	7	20073886	SCOTT, JACK	10/4/2007 0:00	102		20	Open Hole		363251	738 ROBERTS
38.16555556	-86.81638889	0308SE	PORTLAND	7	20074255	DELMOTTIE, RALPH	9/6/2007 0:00	65	15	20	Open Hole	Clear	362956	756 SUMMER
38.20416667	-86.8225	0308SE	PORTLAND	7	20083542	COCHRAN, DAVID	8/28/2008 0:00	120	15	27	Open Hole	Clear	363216	758 SUMMER
38.18361111	-86.56416667	0308SE	PORTLAND	8	16500240	BRILEY & WEBB	1/3/1987 0:00	60	30	54		Good	363101	740 SUMMER
38.17888889	-86.55305556	0308SE	PORTLAND	8	16500252	WHITAKER L	10/3/1987 0:00	90	2			Bad	363044	277 SUMMER
38.18111111	-86.57972222	0308SE	PORTLAND	8	16500253	BRILEY M	9/15/1987 0:00	63	6	20		Good	363042	277 SUMMER
38.18111111	-86.56164444	0308SE	PORTLAND	8	16500267	BRILEY H	4/26/1988 0:00	71	2	37		Good	363126	277 SUMMER
38.2	-86.57361111	0308SE	PORTLAND	8	16500383	BELCHER C	6/10/1988 0:00	80	5	59		Good	363200	98 SUMMER
38.16916667	-86.55777778	0308SE	PORTLAND	8	16500386	SUMMERS	7/21/1989 0:00	45	10	23		Bad	363009	98 SUMMER
38.17361111	-86.55138889	0308SE	PORTLAND	8	16500453	NABORS, CHARLES	7/8/1970 0:00	45	2	23		Bad	363025	98 SUMMER
38.20111111	-86.56083333	0308SE	PORTLAND	8	16500454	EDISON R	7/8/1970 0:00	53	3	24		Good	363204	98 SUMMER
38.18633333	-86.56611111	0308SE	PORTLAND	8	16500465	KELLEY W	3/20/1970 0:00	60	4	26		Good	363116	277 SUMMER
38.195	-86.5625	0308SE	PORTLAND	8	16500466	EDISON W	1/23/1970 0:00	63	24	28		Bad	363142	277 SUMMER
38.19083333	-86.56361111	0308SE	PORTLAND	8	16500497	BIGGS C	11/17/1970 0:00	58	5	20		Good	363127	277 SUMMER
38.19111111	-86.56222222	0308SE	PORTLAND	8	16500500	BRILEY H	7/8/1971 0:00	100	20	42		Good	363126	191 SUMMER
38.18811111	-86.55777778	0308SE	PORTLAND	8	16500618	SUMMERS J	10/15/1971 0:00	25	5	20		Good	363009	191 SUMMER
38.17555556	-86.5675	0308SE	PORTLAND	8	16500620	RAY E	10/15/1971 0:00	75	10	40		Good	363119	191 SUMMER
171.5144444	-86.57555556	0308SE	PORTLAND	8	16500717	COULBRETH	8/2/1972 0:00	100	7	40		Good	363032	191 SUMMER
38.17777778	-86.57888889	0308SE	PORTLAND	8	16500962	WORLEY B.	7/14/1975 0:00	60	5	23		Good	363052	98 SUMMER
38.1805556	-86.56777778	0308SE	PORTLAND	8	16500969	GOLDSBY C.V.	6/4/1975 0:00	70	10	24		Good	363040	98 SUMMER
38.18111111	-86.57333333	0308SE	PORTLAND	8	16501152	BRILEY C	7/13/1977 0:00	77		34		Good	363117	98 SUMMER
38.18944444	-86.56444444	0308SE	PORTLAND	8	16501157	WHELETER, WILBURN	10/5/1977 0:00	100	4	37		Good	363128	740 SUMMER
38.18083333	-86.54369999	0308SE	PORTLAND	8	16501192	ROBERTSR	3/5/1978 0:00	100				Good	363203	497 SUMMER
38.17444444	-86.56144444	0308SE	PORTLAND	8	16501193	VOOCHES, RON	4/28/1978 0:00						363124	740 SUMMER
38.19472222	-86.56166667	0308SE	PORTLAND	8	16501198	DURETT, RON	5/8/1978 0:00						363028	740 SUMMER
38.18811111	-86.56088889	0308SE	PORTLAND	8	16501227	PARKS J.H.	7/1/1978 0:00	80	5	42		Good	363159	497 SUMMER
38.18166667	-86.56777778	0308SE	PORTLAND	8	16501229	ROGERS, EUGENE	7/10/1978 0:00						363159	740 SUMMER
38.18944444	-86.56433333	0308SE	PORTLAND	8	16501265	HOOPER D J	11/13/1978 0:00	85	15	41		Good	363121	15 SUMMER
38.18944444	-86.56444444	0308SE	PORTLAND	8	16501301	HENSLEY C	8/8/1979 0:00	100	7	63		Good	363158	15 SUMMER
38.18666667	-86.54166667	0308SE	PORTLAND	8	16501388	BELCHE, CHARLES AL	8/10/1983 0:00	80	10	60	Slotted	Good	363000	497 SUMMER
38.16666667	-86.54166667	0308SE	PORTLAND	8	16501441	CLAY, BRUCE	8/28/1984 0:00	80	10	21	Open Hole		363000	497 SUMMER
38.16866667	-86.54166667	0308SE	PORTLAND	8	16501483	MAULDEN, JAMES	4/15/1985 0:00	85	10	20	Open Hole		363000	497 SUMMER
38.16666667	-86.54166667	0308SE	PORTLAND	8	16501546	ADAMS, DAVID	1/24/1986 0:00	100	20	35	Slotted	Good	363000	566 SUMMER
38.16666667	-86.54166667	0308SE	PORTLAND	8	16501561	ODER, SUSANNE	3/31/1986 0:00	80	12	46	Slotted	Good	363000	568 SUMMER
38.16666667	-86.54166667	0308SE	PORTLAND	8	16501588	THOMPSON, JOHN A	5/10/1986 0:00	88	10	20	Open Hole		363000	497 SUMMER
38.16666667	-86.54166667	0308SE	PORTLAND	8	16501578	ANDERSON, ART	8/18/1986 0:00	60	10	31	Open Hole	Good	363000	581 SUMMER
38.16666667	-86.54166667	0308SE	PORTLAND	8	16501688	BROWN, WILLIAM	8/22/1987 0:00	90	3		Open Hole	Good	363000	549 SUMMER
38.175	-86.54833333	0308SE	PORTLAND	8	16508038	HALL, TOWN SPRING	2/24/2001 0:00		100				363030	740 SUMMER
38.16833333	-86.54972222	0308SE	PORTLAND	8	20023405	PARKS, JASON	10/25/2002 0:00	70	12	58	Slotted	Clear	363066	647 SUMMER
38.16811111	-86.55361111	0308SE	PORTLAND	8	20030281	TRIMBLE, MARK	12/19/2002 0:00	110	10	34	Open Hole	Clear	363057	758 SUMMER
38.17305556	-86.5425	0308SE	PORTLAND	8	20031002	SALÉE, TIM	4/7/2003 0:00	240	0.5		Open Hole		363023	647 SUMMER
38.17611111	-86.54884444	0308SE	PORTLAND	8	20031003	CAMPBELL, LEE	4/7/2003 0:00	165	0	22	Open Hole		363034	647 SUMMER
38.17722222	-86.55833333	0308SE	PORTLAND	8	20041491	PHILBAUM, DON	4/16/2004 0:00	128	10	62	Open Hole	Clear	363141	756 SUMMER
38.19361111	-86.55388889	0308SE	PORTLAND	8	20082210	CAMPBELL, ALTON	6/9/2008 0:00	145	10	20	Open Hole	Clear	363038	756 SUMMER
38.19416667	-86.56416667	0308SE	PORTLAND	8	20101777	WASHBURN, JOYCE	9/1/2010 0:00	150	2.25	28	Open Hole	Clear	363137	222 SUMMER
38.19527778	-86.56811111	0308SE	PORTLAND	8	20111023	DRAYTON, ROY	5/9/2011 0:00	85	7	41	Open Hole	Clear	363139	756 SUMMER
-88.33333333	143.33333333	0308SE	PORTLAND	8	20131846	BELCHER, ROY THOMAS	8/16/2011 0:00	39	30	20		Clarity	363143	758 SUMMER
-88.33333333	143.33333333	0308SE	PORTLAND	8	91001884	LANE FARMS	10/8/1980 0:00	100		54	Open Hole			581 SUMMER
-88.33333333	143.33333333	0308SE	PORTLAND	8	91003801	DURETT, KEVEN	11/7/1981 0:00	121	3	34	Open Hole			848 SUMMER
-88.33333333	143.33333333	0308SE	PORTLAND	8	93004153	ALLEN, KEN	9/10/1983 0:00	150	8	27	Open Hole			191 SUMMER
-88.33333333	143.33333333	0308SE	PORTLAND	8	98002338	BRILEY, ROBERT	6/8/1987 0:00	110	8	58		Unknown		682 SUMMER
-88.33333333	143.33333333	0308SE	PORTLAND	8	98002840	KIBBEY, GARRY	8/24/1987 0:00	100	8	62	Open Hole			191 SUMMER
-88.50611111	-86.50611111	0308SE	PORTLAND	9	16500055	SOCOL, O	6/22/1984 0:00	90	2	40		Unknown		251 SUMMER
-88.50844444	-86.50844444	0308SE	PORTLAND	9	16500078	BROWER C L	7/29/1984 0:00	73	2	30		Good	363130	251 SUMMER
-88.52805556	-86.52805556	0308SE	PORTLAND	9	16500083	BROWN L L	8/13/1984 0:00	60	4	30		Good	363212	251 SUMMER
-88.50168887	-86.50168887	0308SE	PORTLAND	9	16500153	LUNDQUIST B	4/27/1986 0:00	85		18		Good	363109	304 SUMMER
-88.53527778	-86.53527778	0308SE	PORTLAND	9	16500154	WILSON B	6/5/1985 0:00	30	5	7		Good	363022	304 SUMMER
-88.52844444	-86.52844444	0308SE	PORTLAND	9	16500181	RUCK J	8/9/1985 0:00	50	5	30		Good	363141	304 SUMMER
-88.51684444	-86.51684444	0308SE	PORTLAND	9	16500254	BRILEY H	8/30/1987 0:00	58	40	20		Good	363057	277 SUMMER
-88.5025	-86.5025	0308SE	PORTLAND	9	16500540	CATHCART C	5/13/1971 0:00	95	10	78		Good	363130	98 SUMMER
-88.5025	-86.5025	0308SE	PORTLAND	9	16500848	KATHCART	2/17/1972 0:00	145	6	28		Bad	363131	98 SUMMER
-88.51777778	-86.51777778	0308SE	PORTLAND	9	16500939	WHITLEY L	2/18/1975 0:00	70	5	20		Good	363104	98 SUMMER
-88.53872222	-86.53872222	0308SE	PORTLAND	9	16500947	RANDOLPH D.	3/28/1976 0:00	80	3	39		Good	363217	98 SUMMER
-88.5226	-86.5226	0308SE	PORTLAND	9	16500946	SMITH J.B.	5/23/1975 0:00	35	2	6		Good	363200	98 SUMMER
38.17833333	-86.50833333	0308SE	PORTLAND	9	16500953	WILSON R.A.	4/28/1975 0:00	70	5	31		Good	363042	98 SUMMER

38.16866667	-86.5 0308SE	PORTLAND	9	16501524	BLEVINS, T L	5/8/1985 0:00	21	0	20	Open Hole	Bad	36.3000	120 SUMMER
38.16866667	-86.5 0308SE	PORTLAND	9	16501525	BLEVINS, T L	5/8/1985 0:00	45	10	41	Open Hole	Good	36.3000	120 SUMMER
38.16866667	-86.5 0308SE	PORTLAND	9	16501634	JENNIGAN, JOE	4/7/1987 0:00	125	4	41	Open Hole	Good	36.3000	120 SUMMER
38.17666667	-86.52777778 0308SE	PORTLAND	9	16508037	UNKNOWN653			2				36.3038	740 SUMMER
38.19811111	-86.52166667 0308SE	PORTLAND	9	20014498	STERRY, WENDELL	10/11/2001 0:00	75	10	49	Open Hole	Clarity	36.3155	222 SUMMER
38.19811111	-86.51138889 0308SE	PORTLAND	9	20020680	WARNER, ANNA	2/18/2002 0:00	100	10	29	Open Hole	Clarity	36.3049	548 SUMMER
38.19872222	-86.52111111 0308SE	PORTLAND	9	20021178	PITT, CLIFF	4/29/2002 0:00	105	6	29	Open Hole	Clarity	36.3011	647 SUMMER
38.20472222	-86.50472222 0308SE	PORTLAND	9	20022552	STEPHEN, CHARLES W	7/11/2002 0:00	100		41	Open Hole			549 SUMMER
38.165	-86.54111111 0308SE	PORTLAND	9	20022722	BRUST, CHARLES	6/20/2002 0:00	50	25	29	Open Hole	Clear	36.3106	756 SUMMER
38.17305556	-86.53722222 0308SE	PORTLAND	9	20030278	VATONE, KURT	11/27/2002 0:00	117	17	83	Open Hole	Clear	36.3023	756 SUMMER
38.17388889	-86.54194444 0308SE	PORTLAND	9	20042738	MORRIS, PENNY	8/7/2004 0:00	170	7	53	Slotted	Clear	36.3026	756 SUMMER
38.16805556	-86.52027778 0308SE	PORTLAND	9	20063185	MAJLDER, GARY	6/13/2006 0:00	92	10	20	Open Hole	Clear	36.3005	756 SUMMER
38.16944444	-86.52166667 0308SE	PORTLAND	9	20070386	PITT, CLIFF	1/3/2007 0:00	80	3.5	32	Open Hole	Clear	36.3010	191 SUMMER
38.18055556	-86.54027778 0308SE	PORTLAND	9	20090066	BERMAN, DALE	11/14/2007 0:00	160	4	104	Open Hole	Clear	36.3050	756 SUMMER
38.18272222	-86.50638889 0308SE	PORTLAND	9	20102582	JONES BROTHERS	10/15/2010 0:00	76					36.3056	840 SUMMER
38.18272222	-86.50638889 0308SE	PORTLAND	9	20102583	JONES BROTHERS	10/15/2010 0:00	76					36.3056	840 SUMMER
38.18272222	-86.52138889 0308SE	PORTLAND	9	20111078	MCJUFFEE, TOM	5/31/2011 0:00	100	50	44	Open Hole	Clear	36.3156	222 SUMMER
38.20138889	-86.52388889 0308SE	PORTLAND	9	20151248	NODINE, ROGER	7/30/2015 0:00	150	6	41	Open Hole	Clear	36.3204	222 SUMMER
-58.33333333	143.33333333 0308SE	PORTLAND	9	90000291	GEORGE, LILA	1/2/1990 0:00	70	4	46	Open Hole	Good		568 SUMMER
-58.33333333	143.33333333 0308SE	PORTLAND	9	90001741	RIGGS, GLENN	6/22/1990 0:00	90	15	20	Open Hole	Good		468 SUMMER
38.16866667	-86.5 0308SE	PORTLAND	9	92002930	MATZ, JAMES	7/30/1993 0:00	80	5	21			36.3000	568 SUMMER
-58.33333333	143.33333333 0308SE	PORTLAND	9	93001610	MORISS, J C	4/22/1993 0:00	75	8	21	Open Hole			568 SUMMER
38.17083333	-86.52361111 0308SE	PORTLAND	9	99004137	SLUCHER, LARRY	5/9/1993 0:00	68	0.3	43	Open Hole	Good	36.3015	541 SUMMER

[illegible]

**Domestic Well Survey Report
Inactive Treatment Lagoon
Cross Plains, Robertson County, Tennessee
TTL Project No. 000190803199.00**

ATTACHMENT E

**SUMMARY TABLE OF
IDENTIFIED DOMESTIC WATER
SUPPLY WELLS**

TABLE 1 - SUMMARY TABLE OF IDENTIFIED DOMESTIC WATER SUPPLY WELLS**INACTIVE TREATMENT LAGOON****CROSS PLAINS, ROBERTSON COUNTY, TENNESSEE**

Well	Well ID	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Well Data Resource
1	16508026	36.511389	-86.641111	EDR, TDWR
2	20170839	36.512778	-86.654722	TDWR
3	20121934	36.520278	-86.651389	TDWR
4	14700774	36.521944	-86.685556	EDR, TDWR
5	14700767	36.522778	-86.683889	TDWR
6	14700006	36.523611	-86.684722	TDWR
7	20191148	36.528333	-86.679167	TDWR
8	14700582	36.530833	-86.670556	EDR, TDWR
9	14700651	36.534167	-86.636944	EDR, TDWR
10	16508025	36.534444	-86.633889	TDWR
11	16508027	36.535	-86.634167	EDR, TDWR
12	20150232	36.541667	-86.650833	EDR, TDWR
13	20054403	36.543611	-86.6375	EDR, TDWR
14	20073986	36.5475	-86.665556	EDR, TDWR
15	20060436	36.550833	-86.667778	TDWR
16	20060437	36.551111	-86.6675	EDR, TDWR
17	20161276	36.552222	-86.643333	TDWR
18	20031019	36.552222	-86.665556	EDR, TDWR

TTL