OP III ATX Ledgestone I, LP

Citizen House Ledgestone Well No. 1 (58492OP2)

Production Authorization Application

for

OP III ATX Ledgestone I, LP

500 W. 5th Street, Ste. 700

Austin, TX 78701

Travis County, Texas

July 2025

WRGS Project No. 256-002-24

Prepared by:

Wet Rock Groundwater Services, L.L.C.

Groundwater Specialists

317 Ranch Road 620 South, Suite 303

Austin, Texas 78734

Phone: 512-773-3226 • www.wetrockgs.com

TBPG Firm No: 50038

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1 – Application Form

Application for Well Production Authorization

SOUTHWESTERN TRAVIS COUNTY GROUNDWATER CONSERVATION DISTRICT

P.O. Box 340595, Austin, TX 78734 · Tel. 512-276-2875 · www.swtcgcd.org

Complete this application to receive a permit to produce and use groundwater from any type of well in the District requiring either an Operating Permit or a General Permit by Rule. Consult with the District to confirm what type of authorization is required for your well, and what processes and schedule will be involved in approving your permit. Select the type and category of permit that you are requesting below, and then complete and submit this application form to the District, along with its supporting documentation and all applicable fees per the District Fee Schedule. You may mail the completed form and other materials to the address above, or scan the form and supplemental materials and email it to staff@swtcgcd.org.

Type of Production Authorization and Its Associated *Application* Fee (check one):

- ☐ **$ 400 – General Permit by Rule (Non-exempt Domestic Use (NDU) Permit or Test Well Permit)**
- ☐ **$ 400 – General Permit by Rule (Limited Production Permit)**
- ☐ **$ 400 – Operating Permit, Agricultural Use**
- ☑ **$ 750 – Operating Permit, Non-agricultural Uses**
- ☐ **$ 300 – Amendment of Existing Operating Permit for Major Modification, Agricultural Use**
- ☐ **$ 400 – Amendment of Existing Operating Permit for Major Modification, Non-agricultural Use**
- ☐ **$ 400 – Amendment of Existing General Permit by Rule for Major Modification**

For Well Registration/ID Number 58492OP2

Section I. Owner Contact Information

Please check the box that appropriately describes the applicant: ☐ Landowner/Grantor ☐ Lessee/Grantee

Well Owner /Applicant (Entity name): OP III ATX Ledgestone I, L.P.

Contact Person: Luke Phillippi

Physical Well Address: 9021 W US HWY 290, City: Austin Zip: 78736 County: Travis

Property lot/tract size: 36.175 acres

Email: lphillippi@endeavor-re.com Primary Phone: 512-682-5500 Secondary Phone: _____

☐ Check this box if the mailing address is the same as the physical address

Mailing Address: 500 W. 5th Street, Ste 700 City: Austin Zip: 78701 County: Travis

Technical Consultant

This is the person who may be employed by the applicant to complete this application on the applicant's behalf.

Consultant Name: Andrew Worsley, P.G.

Mailing Address: 317 RR 620 S. Ste. 303

City: Lakeway, Texas Zip: 78734

Primary Phone: 254-315-1129

Secondary Phone: _____

Email: a.worsley@wetrockgs.com

Alternate Point of Contact (Well Site Access)

Contact Name: Vito Trupiano

Mailing Address: 500 W. 5th Street, Ste 700

City: Austin, Texas Zip: 78701

Primary Phone: 512-682-5500

Secondary Phone: _____

Email: vtrupiano@endeavor-re.com

Section II. Supporting Ownership Documentation

1. **Property Deed.** Provide a complete copy of the recorded deed, showing current ownership, legal description, and a date recorded. If the applicant is a lessee/grantee then provide a copy of the recorded easement, lease, or memorandum of lease.
2. **Property Survey.** Provide a certified copy of the most recent property survey. If a subdivision plat is applicable, please also provide a recorded copy of the subdivision plat.
3. **Site Plan and Coordinates.** Provide a map of the property or a site plan showing the location of the well relative to adjacent property lines AND the GPS coordinate locations of the following:
   - the well to be permitted,
   - the nearest septic tank and septic absorption field/ septic spray area, and
   - the nearest source(s) of potential contamination (within 150ft of well).

Section III. Permit Request

Requested Permit Type (e.g. Operating - Non-Ag; Operating - Ag; General Permit - NDU, etc.): Operating - Non-Ag
Permit Volume Requested: 2,980,000 gallons per year Aquifer To Be Used for Production (specify): Lower Trinity
Proposed Primary Use Type: Irrigation Other Proposed Use Types: N/A
Is this request for: a new well, a change to an existing well, or an amendment to an existing permit? (specify one)
New Well

Section IV. Declarations

Initial to indicate that the applicant has read and understands the following declarations.

___The applicant agrees that water produced/withdrawn from the well in reference will be put to beneficial use at all times.
___The applicant understands that failure to submit all required application items within the application review period will result in an administratively incomplete application and non-issuance of a permit.
___The applicant will comply with the District Rules, all orders, and permits promulgated pursuant to the District Rules.
___The applicant will comply with well plugging and capping guidelines set forth in these Rules and will report well closures as required in Rule 4.4.
___Many of the incorporated cities within Travis County have ordinances concerning the drilling of wells within their city limits, and Travis County also has groundwater supply-related regulations. It is your responsibility to comply with County regulations and your city ordinances regarding the use of groundwater and drilling of wells. The permits issued by the District do not confer any right to violate any county regulations or city ordinances regarding groundwater.
___The applicant understands that this permit confers no vested rights in the holder and the permit is non-transferable. **Written notice must be given to the District by the permittee prior to any sale or lease of the well covered by the permit.**

Section V. Applicant or Authorized Agent Sworn Statement

I hereby make application to the Southwestern Travis County Groundwater Conservation District for the purpose indicated above for the water well described herein, and I certify that I am the property owner/grantor or lessee/grantee or an Authorized Agent, and that each and all the statements herein are true and correct, and that I will comply with District Rules, Well Construction Standards, and groundwater use permit and plan requirements. I hereby authorize the District access to this property following reasonable advance notice or, in an emergency, immediately, with such emergency access reported to the owner if advance notice was not possible. The District may access the well for the purposes of inspecting, collecting water quality samples, and investigating conditions relating to the withdrawal, waste, water quality, pollution, or contamination of groundwater.

_____ _____ _____
Signature of Applicant or Authorized Agent* **Print Name** **Date**
*(*Notarized Agent Authorization Form Required)*

State of Texas, County of _____ . SWORN TO AND SUBSCRIBED before me by the said owner or agent on this the ____day of _____20__.

_____ _____
Notary Public, State of Texas My commission expires

SUPPLEMENTAL APPLICATION INFORMATION

The following Items must be completed and submitted with your Production Authorization Application form.

Item 1. Written Descriptive Statements

The applicant must provide a written detailed statement that addresses all of the following components in one "type-written" statement in a Word document format. The submitted Word document should be signed and dated.

a) Permit Type
- State the type of permit that you are applying for (for example, Non-exempt Domestic Use General Permit; Non-Ag Operating Permit; etc.)
- State whether this is for a previously existing well or for a new well that has not yet been put into production for beneficial use.

b) Nature, Purpose & Location
- Indicate on a map and with GPS coordinates, the total number of existing wells on the entire property, in use and not in use.
- Identify the well(s) from which the proposed groundwater volume will be produced. Provide any available drilling reports or geophysical logs of the well(s) to be produced.
- Describe the well location (GPS coordinates) and the proposed receiving area(s) of groundwater produced from the well, including the characteristics and uses of any surface impoundments.
- Describe the nature and purpose of the various proposed uses including proposed uses by persons other than the well owner.
- Describe Proposed Transfers or Transports – Location and purpose of any water to be resold, leased, transferred or transported.

c) Pumpage Volume
- State the requested permit pumpage volume and provide a description of how the requested pumpage volume was determined. The applicant shall provide pumpage volume calculations based on the type of use, anticipated pumping capabilities, pumping times, pumping frequency, and other pertinent data to substantiate approximate groundwater production. The requested pumpage volume should demonstrate reasonable nonspeculative demand.
- Describe the anticipated pumping rate at which water will be withdrawn from each well. Also provide the anticipated pump size, pump depth.
- Apportion the annual volume by typical use per calendar month and quarter (approximations/estimates are okay.)

d) Demand Trends (for Public Water Supply Providers only)
- Describe any anticipated future demand trends, long-term system growth, and associated pumpage needs related to those trends.
- List a breakdown of the projected annual volume by types of use (DWS, commercial, irrigation, industrial, etc.).
- Provide a projected quarterly timeline detailing the anticipated pumpage volumes for the first three to five years of pumping.
- For retail public water suppliers, provide an estimated or calculated per capita and/or household consumption.

e) Conservation Practices
- Describe any water conservation measures or practices that are anticipated or are currently in place.

Item 2. Related Permits and Authorizations

Provide a copy of any notices of application made to the TCEQ to obtain or modify a CCN in order to provide water or wastewater service with water obtained pursuant to the requested production permit. Also, provide notice of any pending, denied, or remanded authorization from a local, state, or federal agency relating to water or wastewater.

Item 3. Transfers Documentation

If the groundwater is to be resold, leased, or otherwise transferred to others, provide the location to which the groundwater will be delivered, the purpose for which the groundwater will be used, and a copy of the legal documents establishing the right for the groundwater to be sold, leased, or otherwise transferred, including but not limited to any contract for sale, lease, or transfer of groundwater. Otherwise, state "Groundwater from this well will be used solely on-site by well owner or agent."

Item 4. User Conservation Plan and User Drought Contingency Plans

District staff can provide you templates for a User Conservation Plan (UCP) and a User Drought Contingency Plan (UDCP), upon request. Each permittee, including both Operating Permittees and General Permit holders, are required to develop and comply with their own, permittee-specific UCP and UDCP. Both will need to be completed, signed, and submitted to the District.

Item 5. Hydrogeological Report

Owners of all existing wells seeking an Operating Permit and or proposed new wells with annual production less than 1 million gallons and seeking an Operating Permit are required to conduct or have previously conducted a specific capacity test of the well and report that in this part of the application. For wells seeking an Operating Permit and having production volumes equal to or greater than 1 million gallons per year, a prescribed aquifer test must be performed on the well to be permitted and a defined hydrogeological report is required to be included in this part of the application. A satisfactory hydrogeological report can only be performed on a well that is constructed to discretely produce from the target production zone and equipped for the ultimate planned use. If a hydrogeological report is required, District staff will coordinate with the applicant on fulfilling this component of the application. Please refer to guidance document: *Guidelines for Hydrogeologic Reports and Aquifer Testing*.

Item 6. Public Notice Contact List/Map

For both existing and proposed new wells seeking an Operating Permit, a public hearing and a published public notice are required. For new and modified existing wells seeking an Operating Permit for over 1 million gallons per year, notice of application must also be mailed to all Public Water Suppliers and persons who own property located within a ¼-mile radius of the proposed well site by certified mail, return receipt requested. District staff can provide the type of information that must be contained in the notice.

☐ Location map showing:
- GPS coordinates AND latitude/longitude location of the proposed well/existing well to be modified.
- mapped property parcels and mapped wells within ¼-mile radius of the proposed well/existing well in reference.
- mapped CCNs or PWS Service areas within ¼-mile radius of the proposed well/existing well in reference.

☐ Mailing List: Property Owners
- Owner name, mailing address, physical addresses of all property owners within ¼-mile radius that will receive notice.
  Note - This is only applicable for new and modified existing wells seeking an Operating Permit for over 1 million gallons per year.

☐ Mailing List: Public Water Suppliers
- Name/Mailing address/Physical addresses of all the Public Water Suppliers within ¼-mile radius that will receive notice.

Item 7. Additional clarifying information requested by District General Manager

In response to submitted information, the applicant may be asked to submit other clarifying facts, information and considerations deemed necessary by the General Manager for protection of the public health and welfare, and conservation and management of natural resources in the District. If it is determined that additional information is needed, District staff will provide guidance in fulfilling this component of the application.

For District Personnel Use Only

Application Fee Submitted on: __/__/__ Staff Initials____ Application Fee Amount:$_____ Chk #: _____
90 day __/__/__ 180 day __/__/__

Administratively Complete/Incomplete on : __/__/__ Signature of Staff_____
Signature of General Manager_____ Date: __/__/__
Permit Approval Date __/__/__ Approved by: Board or General Manager
Drought Delay □Yes □No Authorized Pumpage Volume: _____Aquifer :_____
Use Type:_____ Permit Type & Term:_____

2 – Property Deed

WARRANTY DEED

THE STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF TRAVIS §

OP III ATX LEDGESTONE I, LP, a Delaware limited partnership ("***Grantor***"), for and in consideration of the sum of Ten Dollars ($10.00) and other good and valuable consideration to it in hand paid and caused to be paid by **OP III ATX LEDGESTONE I, LP**, a Delaware limited partnership ("***Grantee***"), whose address is 500 W 5th Street, Suite 700, Austin, TX 78701, the receipt and sufficiency of which is hereby acknowledged and confessed, has GRANTED, BARGAINED, SOLD, ASSIGNED and CONVEYED, and by these presents does GRANT, BARGAIN, SELL, ASSIGN and CONVEY, unto Grantee:

The real property located in Travis County, Texas and more particularly described in **Exhibit A** attached hereto and made a part hereof for all purposes and any and all structures, fixtures, and improvements situated thereon (collectively, the "***Land***"); together with all of Grantor's right, title and interest in and to the following: (i) all strips and gores between the Land and abutting properties, (ii) all rights in and to easements, air rights, development rights, and drainage rights incidental to the such Land including, without limitation, all development approvals or rights in respect thereto, and (iii) any and all reversionary interests in and to, and all of Grantor's rights to use, any of the foregoing (clauses (i) through (iii) above being herein collectively called the "***Rights and Appurtenances***" and the Land and the Rights and Appurtenances being herein collectively called the "***Real Property***").

TO HAVE AND TO HOLD the Real Property, together with all and singular any other rights and appurtenances thereto in anywise belonging, unto Grantee, its successors and assigns, FOREVER; and Grantor does hereby bind itself, its successors and assigns, to WARRANT AND FOREVER DEFEND all and singular the Real Property unto Grantee, its successors and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof; provided, however, with respect to successors and assigns of Grantee, such warranty of title by Grantor shall be limited to every person whomsoever lawfully claiming, or to claim the same, or any part thereof, by, through, or under Grantor, but not otherwise.

This conveyance is made and accepted subject to all easements, restrictions, rights, reservations, encumbrances and other matters (the "***Permitted Exceptions***") set forth on **Exhibit "B"** attached hereto and made a part hereof for all pertinent purposes.

[End of Page; See Following Page for Signatures]

This instrument is executed effective as of the 20th day of May 2024.

GRANTOR:

OP III ATX LEDGESTONE I, LP, a Delaware limited partnership

By: EOP III Sub GP, LLC, a Delaware limited liability company, its general partner

By: _____
Name: Luke Phillippi
Title: EVP

THE STATE OF TEXAS §
§
COUNTY OF Travis §

This instrument was acknowledged before me on the 20th day of May 2024, by Luke Phillippi, of EOP III Sub GP, LLC, a Delaware limited liability company, the general partner of OP III ATX LEDGESTONE I, LP, a Delaware limited partnership, on behalf of said entities.

_____
Notary Public in and for the
State of Texas
Printed Name: Mary Harrington

My Commission Expires: 7/11/2026

MARY HARRINGTON
Notary Public, State of Texas
Comm. Expires 07-11-2026
Notary ID 131639100

Exhibit A – Land
Exhibit B – Permitted Exceptions

EXHIBIT A

RIVIERA SMA DE LA TULLE SURVEY NO. 68,
ABSTRACT NO. 222
TRAVIS COUNTY, TEXAS

MAY 15, 2024
S001-A116-10072401

LEGAL DESCRIPTION
TRACT 2: 36.175 ACRES

DESCRIPTION OF A 36.175 ACRE TRACT OF LAND SITUATED IN THE RIVIERA SMA DE LA TULLE SURVEY NO. 68, ABSTRACT NO. 222, TRAVIS COUNTY, TEXAS, AND BEING A PORTION OF A CALLED 77.749 ACRE TRACT, CONVEYED TO OP III ATX LEDGESTONE I, LP AND RECORDED IN DOCUMENT NO. 2023111903, OFFICIAL PUBLIC RECORDS TRAVIS COUNTY, TEXAS (O.P.R.T.C.TX.); SAID 36.175 ACRE TRACT BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A 5/8-INCH IRON ROD WITH CAP "LJA SURVEY" SET (GRID COORDINATES N:10,055,178.00, E:3,056,245.77) ON THE COMMON LINE OF SAID 77.749 ACRE TRACT AND THE SOUTHEAST RIGHT-OF-WAY LINE OF LEDGESTONE TERRACE (50' WIDE RIGHT-OF-WAY) FOR THE WEST CORNER OF THE HEREIN DESCRIBED TRACT, FROM WHICH A 1/2-INCH IRON ROD WITH CAP STAMPED "TRIAD RPLS 5952" FOUND BEARS SOUTH 26 DEGREES 45 MINUTES 28 SECONDS WEST, A DISTANCE OF 602.17 FEET;

THENCE NORTH 26 DEGREES 45 MINUTES 28 SECONDS EAST, WITH SAID COMMON LINE, A DISTANCE OF 717.80 FEET TO A 5/8-INCH IRON ROD WITH CAP "LJA SURVEY" SET, FOR THE NORTHWEST CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE OVER AND ACROSS SAID 77.749 ACRE THE FOLLOWING TWO (2) COURSES AND DISTANCES:

1) SOUTH 82 DEGREES 19 MINUTES 13 SECONDS EAST, A DISTANCE OF 379.29 FEET TO A 5/8-INCH IRON ROD WITH CAP "LJA SURVEY" SET FOR AN ANGLE POINT, AND
2) NORTH 74 DEGREES 07 MINUTES 29 SECONDS EAST, A DISTANCE OF 580.67 FEET TO A 5/8-INCH IRON ROD WITH CAP "LJA SURVEY" SET ON THE NORTHEAST LINE OF SAID 77.749 ACRE TRACT, SAME BEING THE NORTHERLY NORTHWEST LINE OF A CALLED 8.768 ACRE TRACT, CONVEYED TO ROBERT K. BEGGS, RECORDED IN DOCUMENT NO. 2004212901, O.P.R.T.C.TX., FOR THE NORTHEAST CORNER OF THE HEREIN DESCRIBED TRACT, FROM WHICH A 1/2-INCH IRON ROD FOUND BEARS NORTH 12 DEGREES 42 MINUTES 32 SECONDS WEST, A DISTANCE OF 21.92 FEET;

THENCE WITH THE NORTHEAST LINE OF SAID 77.749 ACRE TRACT, SAME BEING THE NORTHERLY NORTHWEST LINE OF SAID 8.768 ACRE TRACT THE FOLLOWING THREE (3) COURSES AND DISTANCES:

1) SOUTH 12 DEGREES 42 MINUTES 32 SECONDS EAST, A DISTANCE OF 461.80 FEET TO A 1/2-INCH IRON ROD FOUND,
2) SOUTH 12 DEGREES 00 MINUTES 32 SECONDS EAST, A DISTANCE OF 342.40 FEET TO A 1/2-INCH IRON ROD FOUND, AND
3) SOUTH 16 DEGREES 11 MINUTES 32 SECONDS EAST, A DISTANCE OF 590.19 FEET TO A 5/8-INCH IRON ROD WITH CAP "LJA SURVEY" SET FOR THE SOUTHEAST CORNER OF THE HEREIN DESCRIBED TRACT, FROM WHICH A 1/2 INCH IRON ROD FOUND BEARS SOUTH 16 DEGREES 11 MINUTES 32 SECONDS EAST, A DISTANCE OF 54.04 FEET;

THENCE OVER AND ACROSS SAID 77.749 ACRE THE FOLLOWING ELEVEN (11) COURSES AND DISTANCES:

1) SOUTH 73 DEGREES 48 MINUTES 28 SECONDS WEST, A DISTANCE OF 176.26 FEET TO A 5/8-INCH IRON ROD WITH CAP "LJA SURVEY" SET FOR AN ANGLE POINT,
2) SOUTH 20 DEGREES 56 MINUTES 17 SECONDS WEST, A DISTANCE OF 135.50 FEET TO A 5/8-INCH IRON ROD WITH CAP "LJA SURVEY" SET FOR AN ANGLE POINT,
3) SOUTH 65 DEGREES 56 MINUTES 17 SECONDS WEST, A DISTANCE OF 500.00 FEET TO A 5/8-INCH IRON ROD WITH CAP "LJA SURVEY" SET FOR AN ANGLE POINT,
4) NORTH 78 DEGREES 22 MINUTES 15 SECONDS WEST, A DISTANCE OF 72.68 FEET TO A 5/8-INCH IRON ROD WITH CAP "LJA SURVEY" SET FOR AN ANGLE POINT,
5) NORTH 24 DEGREES 12 MINUTES 17 SECONDS WEST, A DISTANCE OF 130.00 FEET TO A 5/8-INCH IRON ROD WITH CAP "LJA SURVEY" SET FOR AN ANGLE POINT,
6) NORTH 49 DEGREES 54 MINUTES 50 SECONDS EAST, A DISTANCE OF 119.56 FEET TO A 5/8-INCH IRON ROD WITH CAP "LJA SURVEY" SET FOR AN ANGLE POINT,
7) NORTH 40 DEGREES 05 MINUTES 10 SECONDS WEST, A DISTANCE OF 543.63 FEET TO A 5/8-INCH IRON ROD WITH CAP "LJA SURVEY" SET FOR AN ANGLE POINT,
8) NORTH 18 DEGREES 03 MINUTES 13 SECONDS WEST, A DISTANCE OF 175.47 FEET TO A 5/8-INCH IRON ROD WITH CAP "LJA SURVEY" SET FOR AN ANGLE POINT,
9) NORTH 80 DEGREES 37 MINUTES 42 SECONDS WEST, A DISTANCE OF 175.18 FEET TO A 5/8-INCH IRON ROD WITH CAP "LJA SURVEY" SET FOR AN ANGLE POINT,
10) NORTH 66 DEGREES 01 MINUTES 58 SECONDS WEST, A DISTANCE OF 225.94 FEET TO A 5/8-INCH IRON ROD WITH CAP "LJA SURVEY" SET FOR AN ANGLE POINT, AND
11) NORTH 56 DEGREES 17 MINUTES 22 SECONDS WEST, A DISTANCE OF 125.00 FEET TO THE **POINT OF BEGINNING** AND CONTAINING 36.175 ACRES OF LAND, MORE OR LESS.

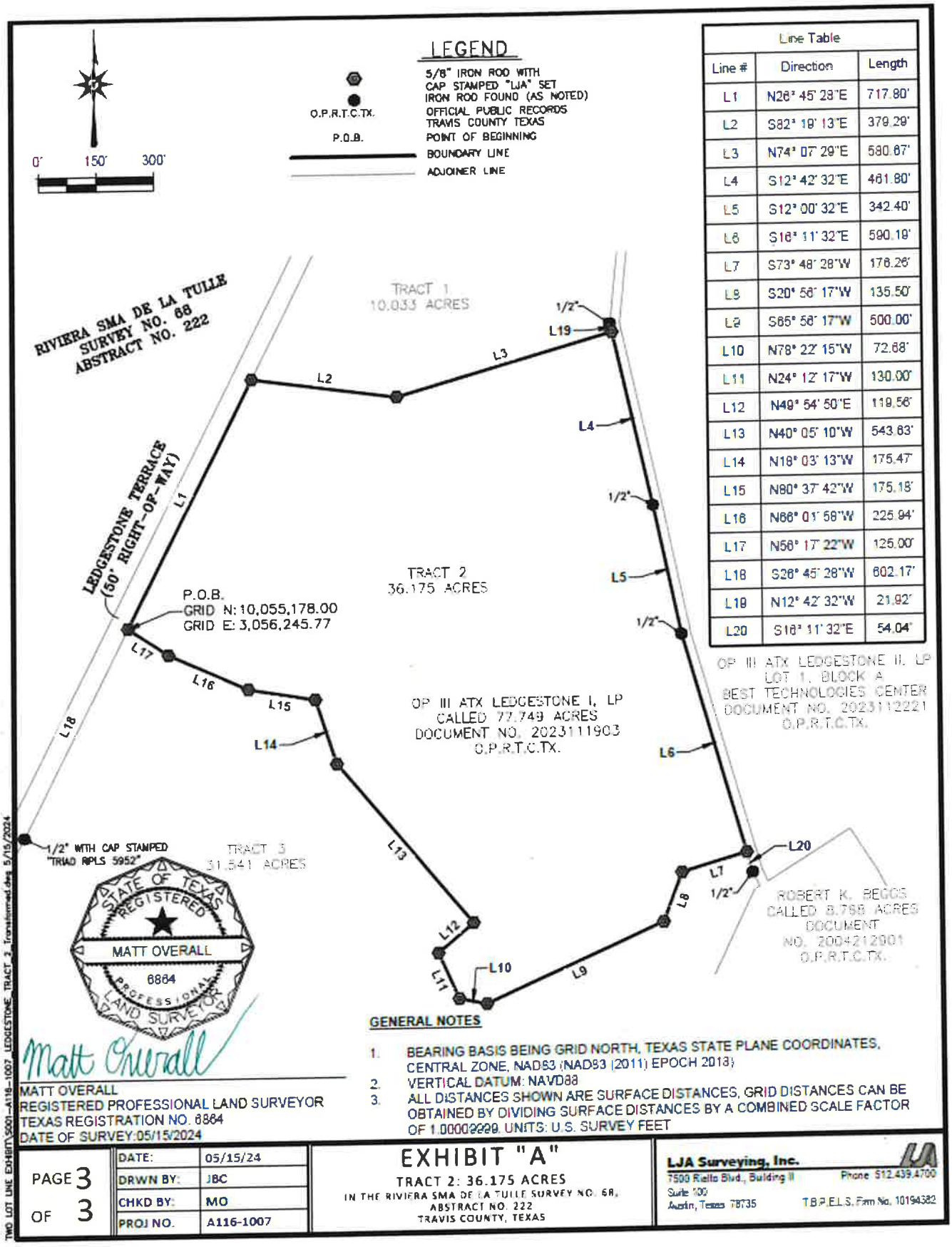
BEARING BASIS:

ALL BEARINGS SHOWN ARE BASED ON THE TEXAS COORDINATE SYSTEM, CENTRAL ZONE, NAD83/2011. ALL DISTANCES SHOWN ARE SURFACE DISTANCES, GRID DISTANCES CAN BE OBTAINED BY DIVIDING SURFACE DISTANCES BY A COMBINED SCALE FACTOR OF 1.00009999. UNITS: U.S. SURVEY FEET.



Matt Overall

MATT OVERALL, RPLS # 6864 DATE: 05/15/2024
LJA SURVEYING, INC.
7500 RIALTO BLVD, BUILDING II, SUITE 100
AUSTIN, TEXAS 78735
TEXAS FIRM NO. 10194382



Line Table		
Line #	Direction	Length
L1	N26° 45' 28"E	717.80'
L2	S82° 19' 13"E	379.29'
L3	N74° 07' 29"E	580.67'
L4	S12° 42' 32"E	461.80'
L5	S12° 00' 32"E	342.40'
L6	S16° 11' 32"E	590.19'
L7	S73° 48' 28"W	178.26'
L8	S20° 56' 17"W	135.50'
L9	S65° 56' 17"W	500.00'
L10	N78° 22' 15"W	72.68'
L11	N24° 12' 17"W	130.00'
L12	N49° 54' 50"E	119.56'
L13	N40° 05' 10"W	543.63'
L14	N18° 03' 13"W	175.47'
L15	N80° 37' 42"W	175.18'
L16	N66° 01' 58"W	225.94'
L17	N56° 17' 22"W	125.00'
L18	S26° 45' 28"W	602.17'
L19	N12° 42' 32"W	21.92'
L20	S16° 11' 32"E	54.04'

STATE OF TEXAS REGISTERED MATT OVERALL 6864 PROFESSIONAL LAND SURVEYOR

Matt Overall

MATT OVERALL
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS REGISTRATION NO. 6864
DATE OF SURVEY:05/15/2024

GENERAL NOTES

1. BEARING BASIS BEING GRID NORTH, TEXAS STATE PLANE COORDINATES, CENTRAL ZONE, NAD83 (NAD83 (2011) EPOCH 2018)
2. VERTICAL DATUM: NAVD88
3. ALL DISTANCES SHOWN ARE SURFACE DISTANCES, GRID DISTANCES CAN BE OBTAINED BY DIVIDING SURFACE DISTANCES BY A COMBINED SCALE FACTOR OF 1.00002999. UNITS: U.S. SURVEY FEET

PAGE 3 OF 3

DATE:	05/15/24
DRWN BY:	JBC
CHKD BY:	MO
PROJ NO.	A116-1007

EXHIBIT "A"

TRACT 2: 36.175 ACRES
IN THE RIVIERA SMA DE LA TULLE SURVEY NO. 68, ABSTRACT NO. 222
TRAVIS COUNTY, TEXAS

LJA Surveying, Inc.
7500 Rialto Blvd., Building II
Suite 100
Austin, Texas 78735
Phone 512.439.4700
T.B.P.E.L.S. Firm No. 10194382

TWO LOT LINE EXHIBIT\5001-A116-1007_LEDGESTONE_TRACT 2_Transformed.dwg 5/15/2024

Exhibit A

EXHIBIT B

Permitted Exceptions

1. 30-foot roadway easements reserved by James W. Maddox and wife Gracie Delmar a. Maddox for themselves, their heirs and assigns, in instruments dated December 31, 1970, recorded in Volume 3978, Page 1320 and Volume 3978, Page 1324, both of the Deed Records of Travis County, Texas.
2. Underground water line easement granted to Lower Colorado River Authority, by instrument dated October 18, 2000, recorded under Document No. 2000174140 of the Official Public Records of Travis County, Texas.
3. Taxes for the year 2024 and subsequent years.
4. All oil, gas, and other minerals, together with all rights relating thereto, express or implied, reserved in instrument recorded under Document No. 2023111903 of the Official Public Records of Travis County, Texas, subject to the waiver of surface rights contained therein.
5. Vendor's Lien retained in Deed dated as of September 28, 2023 and filed for record on September 29, 2023, recorded under Document No. 2023111903 of the Official Public Records of Travis County, Texas, executed by Mitchel Wong, Trustee of the: Michael Y. Wong 1991 Trust; Lawrence Shawn Wong 1991 Trust; Patrick Y. Wong 1991 Trust; and Shannon M. Wong 1991 Trust to OP III ATX Ledgestone I, LP, a Delaware limited partnership, securing the payment of one promissory note of even date in the principal amount of $10,600,000.00, payable to Mitchel Wong, Trustee of the: Michael Y. Wong 1991 Trust; Lawrence Shawn Wong 1991 Trust; Patrick Y. Wong 1991 Trust; and Shannon M. Wong 1991 Trust, additionally secured by Deed of Trust, of even date, to Katherine D. Davy, Trustee, and all terms, conditions and stipulations contained therein, including any additional indebtedness secured thereby, filed for record on September 29, 2023, recorded under Document No. 2023111904 of the Official Public Records of Travis County, Texas.

3 – Property Survey

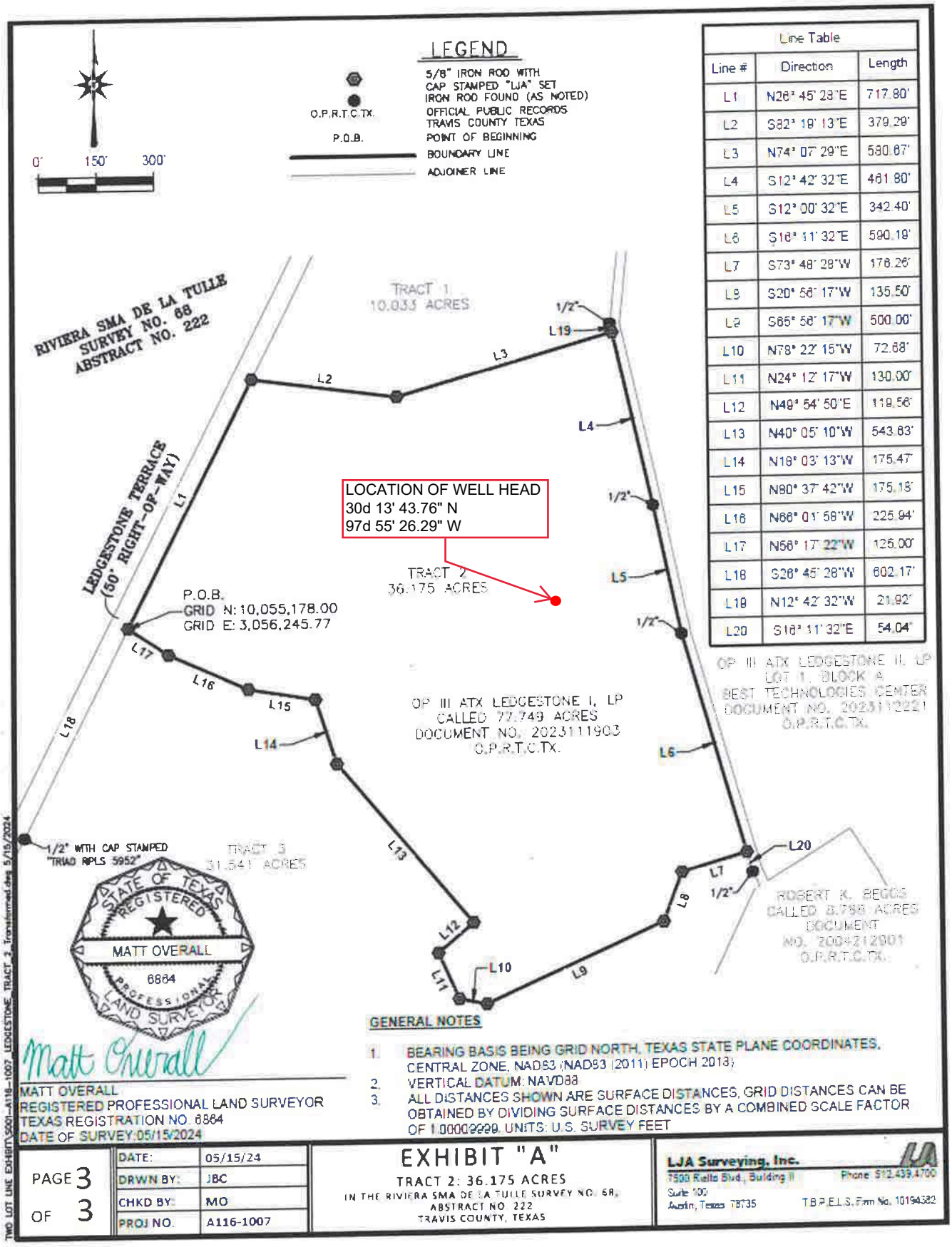
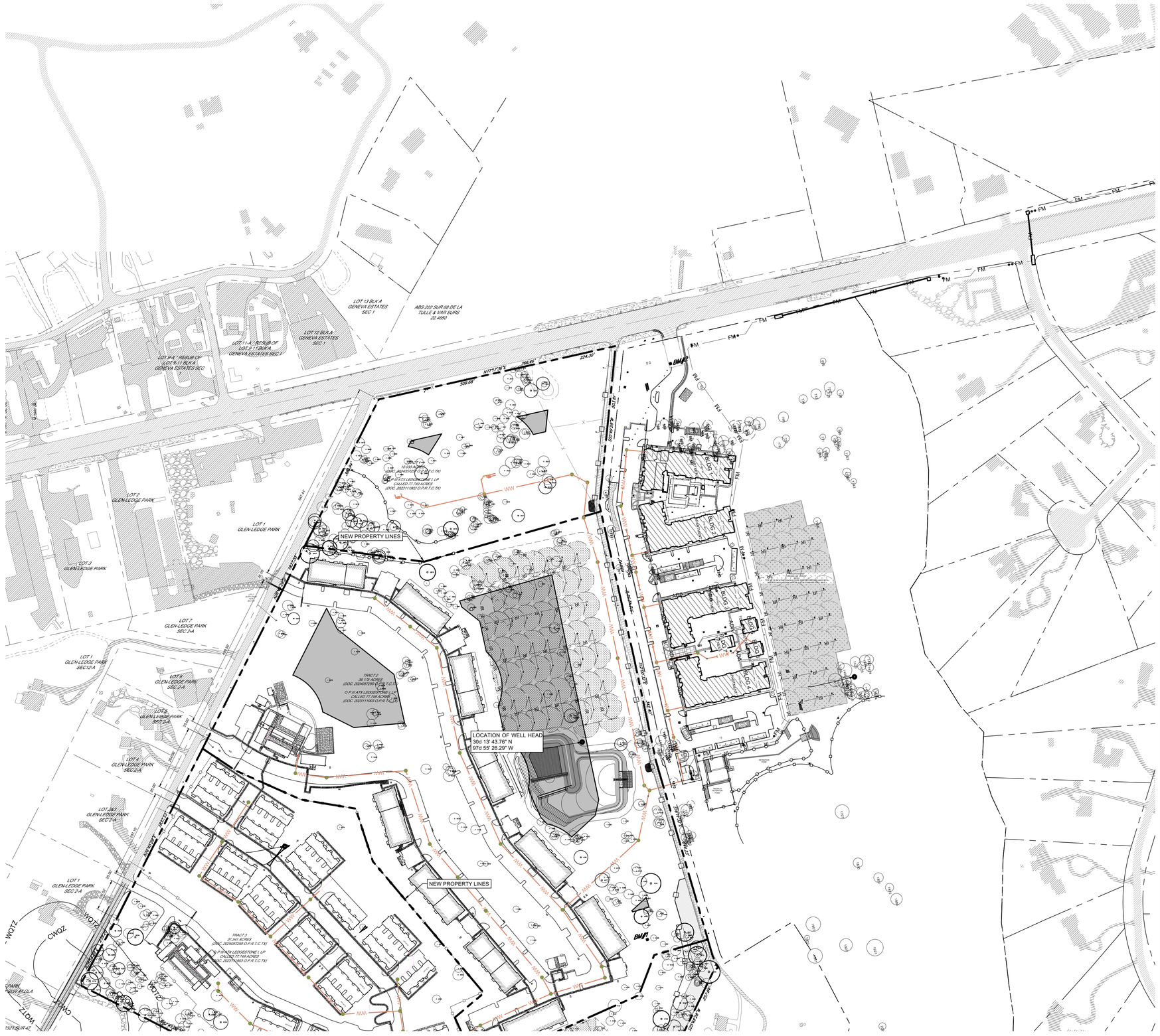

LEGEND
5/8" IRON ROD WITH CAP STAMPED "LJA" SET
IRON ROD FOUND (AS NOTED)
O.P.R.T.C.TX. OFFICIAL PUBLIC RECORDS TRAVIS COUNTY TEXAS
P.O.B. POINT OF BEGINNING
BOUNDARY LINE
ADJOINER LINE
0' 150' 300'
Line Table
Line # | Direction | Length
L1 | N26° 45' 28"E | 717.80'
L2 | S82° 19' 13"E | 379.29'
L3 | N74° 07' 29"E | 580.87'
L4 | S12° 42' 32"E | 461.80'
L5 | S12° 00' 32"E | 342.40'
L6 | S16° 11' 32"E | 590.19'
L7 | S73° 48' 28"W | 178.26'
L8 | S20° 56' 17"W | 135.50'
L9 | S65° 56' 17"W | 500.00'
L10 | N78° 22' 15"W | 72.68'
L11 | N24° 12' 17"W | 130.00'
L12 | N48° 54' 50"E | 119.56'
L13 | N40° 05' 10"W | 543.63'
L14 | N18° 03' 13"W | 175.47'
L15 | N80° 37' 42"W | 175.18'
L16 | N66° 01' 56"W | 225.94'
L17 | N56° 17' 22"W | 125.00'
L18 | S26° 45' 28"W | 602.17'
L19 | N12° 42' 32"W | 21.92'
L20 | S16° 11' 32"E | 54.04'
RIVIERA SMA DE LA TULLE SURVEY NO. 68 ABSTRACT NO. 222
TRACT 1 10.033 ACRES
LEDGESTONE TERRACE (50' RIGHT-OF-WAY)
LOCATION OF WELL HEAD
30d 13' 43.76" N
97d 55' 26.29" W
TRACT 2 36.175 ACRES
P.O.B.
GRID N: 10,055,178.00
GRID E: 3,056,245.77
OP III ATX LEDGESTONE I, LP
CALLED 72.749 ACRES
DOCUMENT NO. 2023111903
O.P.R.T.C.TX.
OP III ATX LEDGESTONE II, LP
LOT 1, BLOCK A
BEST TECHNOLOGIES CENTER
DOCUMENT NO. 2023112221
O.P.R.T.C.TX.
ROBERT K. REGOS
CALLED 8.758 ACRES
DOCUMENT NO. 2004212001
O.P.R.T.C.TX.
1/2" WITH CAP STAMPED "TRIAD RPLS 5952"
TRACT 3 31.541 ACRES
STATE OF TEXAS REGISTERED MATT OVERALL 6864 PROFESSIONAL LAND SURVEYOR
GENERAL NOTES
1. BEARING BASIS BEING GRID NORTH, TEXAS STATE PLANE COORDINATES, CENTRAL ZONE, NAD83 (NAD83 (2011) EPOCH 2018)
2. VERTICAL DATUM: NAVD88
3. ALL DISTANCES SHOWN ARE SURFACE DISTANCES, GRID DISTANCES CAN BE OBTAINED BY DIVIDING SURFACE DISTANCES BY A COMBINED SCALE FACTOR OF 1.00002999. UNITS: U.S. SURVEY FEET
MATT OVERALL
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS REGISTRATION NO. 6864
DATE OF SURVEY: 05/15/2024
PAGE 3 OF 3
DATE: 05/15/24
DRWN BY: JBC
CHKD BY: MO
PROJ NO. A116-1007
EXHIBIT "A"
TRACT 2: 36.175 ACRES
IN THE RIVIERA SMA DE LA TULLE SURVEY NO. 68, ABSTRACT NO. 222
TRAVIS COUNTY, TEXAS
LJA Surveying, Inc.
7500 Rialto Blvd., Building II
Suite 100
Austin, Texas 78735
Phone 512.439.4700
T.B.P.E.L.S. Firm No. 10194382
TWO LOT LINE EXHIBIT\5001-A116-1007_LEDGESTONE_TRACT 2_Transformed.dwg 5/15/2024

Exhibit A

4 – Site Map and Coordinates



150 75 0 150 300

SCALE IN FEET

LEGEND

PROPOSED	EXISTING	
872	872	CONTOUR LINE
		CONCRETE SIDEWALK
		PERVIOUS SIDEWALK
		SIDEWALK RAMP
		HANDICAPPED PARKING SPACE & SIDEWALK RAMP
		CROSSWALK
ST	ST	STORM SEWER LINE
WW	WW	WASTEWATER LINE
		WASTEWATER SERVICE
WL	WL	WATER LINE
		WATER SERVICE
FWL		FIRE LINE
IR		IRRIGATION LINE
		WATER VALVE
		FIRE HYDRANT
	WWMH	WASTEWATER MANHOLE
	SSMH	STORMSEWER MANHOLE
		CURB INLET
		GRATE INLET
		1/2" REBAR FOUND (OR AS NOTED)
		1/2" REBAR WITH CAP FOUND
		1/2" REBAR WITH CHAPARRAL CAP SET
		WATER METER
		UTILITY POLE
	OU	OVERHEAD UTILITIES
		ELEC. UTILITY
		ELEC. MANHOLE
		LIGHT POLE
		TELEPHONE UTILITY
		UNDERGROUND FIBER OPTIC MARKER
		TELEPHONE MANHOLE
		UNDERGROUND GAS MARKER
		CHAIN LINK FENCE

B.M. #1
5/8-INCH IR W / CAP STAMPED "LJA SURVEY"
N,E = 10054574.61, 3057649.53
ELEV. = 1002.54

B.M. #2
MAGNAIL W / SHINER
N,E = 10056393.72, 3057722.58
ELEV. = 981.82

BEARING BASIS:
ALL BEARINGS BASED ON THE TEXAS STATE PLANE COORDINATGE SYSTEM, GRID NORTH, CENTRAL ZONE (4203) NAD83.

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

811 Know what's below. Call before you dig.

LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS

OVERALL PROJECT LAYOUT

9303 & 9601 LEDGESTONE TERRACE, AUSTIN, TX 78737

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 08/08/2024
DESIGNED BY:
DRAWN BY:
CHECKED BY:
DRAWING NAME: A116-1007-PHASE1LOCATIONS.DWG

LJA Engineering, Inc.
7500 Rialto Boulevard
Building II, Suite 100
Austin, Texas 78735
Phone 512.439.4700
Fax 512.439.4716
FRN-F-1386

JOB NUMBER: A116-1007

OPL01

SHEET NO. 1 OF 1 SHEETS

TRAVIS COUNTY TNR No. 22-38855 AUSTIN CASE No. SP-2023-0177D

G:\A116-1007 Ledgestone 290\Design\Construction\CAD\Exhibits\A116-1007-P-WellLocations.dwg
User: omcsawn
Last saved: Aug 26, 24 - 12:56
Plot Date/Time: Aug 26, 24 - 08:51:40

5 – Written Descriptive Statement

Permit Type

OP III ATX Ledgestone I, LP (the Applicant) is currently seeking a Non-Agricultural Operating Permit for one (1) new well with an annual pumpage of 2,980,000 gallons per year. A Drilling Authorization was approved by Southwestern Travis County Conservation District for Well No. 1 (58492OP2; "CHL Well No. 1") on September 19, 2024.

Nature, Purpose, Location

Please refer to the Hydrogeological Report for all pertinent mapping, well reports, and geophysical logs. According to the irrigation calculations provided by both the Applicant's landscape architects and the SWTCGCD, the total irrigated area consists of approximately 158,400 square feet of warm-season turfgrass and 43,600 square feet of mixed landscape beds. In order to irrigate the area, a permit volume of 2,980,000 gallons per year was recommended by SWTCGCD and requested by the Applicant. In order to meet daily demand, CHL Well No. 1 has been outfitted with a submersible pump capable of producing up to 35 gallons per minute (gpm), depending on aquifer conditions and the total dynamic head on the pump. A pump installation certification has been provided to SWTCGCD. The proposed system configuration entails pumping water from CHL Well No. 1 into an adjacent 10,000 gallon ground storage tank. Water from the tank will then be sent into the irrigation system via booster pumps or from a pressure tank. Anticipated operations of irrigation would occur multiple times per week with cycles lasting up to 12 hours, depending on water demand.

Pumpage Volume

The pumping schedule for water to be produced from the well will be dependent upon irrigation demand and precipitation events. Peak pumping demand hours are projected for either the early morning or late evening hours to accommodate typical irrigation schedules and to mitigate evaporative loss; peak pumping demand will also be subject to seasonal change, such as increased usage in the summer and decreased usage in the winter. Below is an estimated monthly apportionment:

Month	Water Demand (gallons)
January	117,715
February	141,046
March	224,826
April	272,548
May	330,875
June	370,114
July	374,356
August	376,477
September	288,456
October	226,947
November	142,107
December	114,534
Total	**2,980,000**

Conservation Practices

The Applicant intends to utilize the groundwater in an efficient, responsible manner. The Applicant will abide by the User Conservation Plan and User Drought Contingency Plans submitted in this application package.

Related Permits and Authorizations

There are no notices or applications filed to Texas Commission on Environmental Quality (TCEQ) to obtain or modify a CCN in order to provide water or wastewater service with water obtained pursuant to the requested production permit.

Transfers Documentation

Groundwater from the well will be used solely on-site by well owner or agent

_____

Signature of Applicant

_____

Printed Name of Applicant

_____

Date of Signature

6 – User Conservation Plan and User Drought Contingency Plans

SOUTHWESTERN TRAVIS COUNTY GROUNDWATER CONSERVATION DISTRICT

User Conservation Plan

8656 Highway 71 West, Building A, Suite 224, Austin TX 78735 · Tel. 512-276-2875 · www.swtcgcd.org

Permitholder: OP III ATX Ledgestone I, LP

Permitted Type of Water Use(s): Operating Permit, Non-agricultural Uses

Registered Well Identification Number(s): 58492OP2

Authorized Annual Groundwater Use Under Permit (gallons): 2,980,000

Monthly distribution of authorized use during non-drought is to be tabulated in Section IV.

The permittee named above has adopted this User Conservation Plan (UCP) as required by the Southwestern Travis County Groundwater Conservation District and agrees to comply with all the applicable District Rules in implementing and enforcing the measures of the enclosed plan.

Permittee Signature: _____ **Date:** _____

Accepted:

_____ _____

(Signature of District General Manager) (Date)

Section I. Background and Purpose of Plan

The Southwestern Travis County Groundwater Conservation District (District) manages all groundwater resources in its jurisdictional area under the authority granted under Chapter 36 of the Texas Water Code and the District's enabling legislation. Conservation and Drought Contingency planning are among the management goals the District must include in its Management Plan that is approved by the Texas Water Development Board no less than every five years. District Rule 5.1(A)(3) requires adoption and implementation of use-specific User Conservation Plans (UCPs) for all well owners/operators that are authorized to use groundwater under an Operating Permit or General Permit issued by the District. The UCP is complementary to the separate User Drought Contingency Plan (UDCP) that is also a requirement of each Permitholder.

The intent of the UCP is to set forth guidelines and ongoing conservation measures that will maximize the availability of the groundwater remaining in the aquifer and the utilization efficiency of the water withdrawn. The guidelines in this section are continuously in effect and may only be replaced by more restrictive requirements as ordered by the Board under an Extreme or Exceptional declared drought stage.

Section II. Ongoing Conservation Measures for All Permitholders

Each Permitholder will adopt and make best efforts to follow these general water-conservation measures all the time, as applicable:

1. Replace faulty or unusable plumbing fixtures or appliances with water saving devices such as low-flow toilets, shower and faucet aerators, and water-efficient devices.
2. Choose and install water-efficient appliances and fixtures in new construction.
3. Check for leaks in toilets at least every six months.
4. Repair dripping faucets and leaky plumbing promptly.
5. At least once each year, cease all water usage and check installed meters to determine if leaks exist in underground transmission lines.
6. Utilize water efficient landscape practices such as water-wise landscape design and drip irrigation for new turf and landscaping.
7. When planning to replace turf and landscape plants, convert high water use turf and landscapes to native and water-wise designs for existing turf and landscaping.
8. Select drought-tolerant vegetation from the list of appropriate native and naturalized plants compiled by the Lady Bird Johnson Wildflower Center (https://www.wildflower.org/collections/collection.php?collection=centex_drought) when installing new or replacing landscape vegetation.
9. Implement a watering schedule endorsed by the District that includes watering restrictions for hose-end and underground irrigation systems.
10. Maximize efficient operation of automatic sprinkler systems to avoid waste by conducting periodic irrigation audits, frequently adjusting controllers based on conditions, installing rainwater shutoff devices, smart clocks and controllers, etc.
11. Wash vehicles using a hose-end sprayer with an automatic shut off or with buckets full of water and not allowing the water to continue to run from the hose when not in use.
12. Use a cover on swimming pools when possible to minimize evaporative loss of water.
13. When possible, consider alternative water supplies including but not limited to rainwater collection and alternative irrigation strategies to improve conservation of water on site.
14. Regularly monitor submitted water meter readings to facilitate detection of possible future system leaks and to quantify success of conservation practices and steps taken for reducing water use during drought conditions.
15. Periodically review and evaluate this User Conservation Plan and implement revisions to the Plan as necessary.

Section III. Additional Conservation Measures Specific to the Designated Type of Groundwater Use for Applicable Permitholders

In addition to the general UCP measures identified in Section II of this Plan, the Permitholder has use-specific water-conservation measures to follow. **Accordingly, by initialing the appropriate subsection heading below for the type of use of groundwater under the permit (as designated in the descriptive info at the top of the first page of this Plan), the Permitholder agrees to adopt and make best efforts to follow these water-use efficiency measures at all times.** Each permitholder must initial at least one of these types of water use.

_____ A. Agricultural Use

(Initial Here)

1. Investigate and implement efficient irrigation practices and utilization of alternate watering sources where possible.

2. Follow a schedule of irrigating in morning and evening times to prevent inefficient evaporation losses.

3. Continue an on-going program of irrigation system leak detection and repair which shall include the consideration and utilization of improved technology when possible.

4. Manage the agricultural areas in such a way that emphasizes precise nutrient management, soil preparation techniques, and adequate watering.

5. Install automatic irrigation systems and controllers for all new irrigation systems. Retrofit manual control systems with automatic systems when feasible.

6. Limit access to irrigation system equipment and controllers only to authorized personnel to prevent inefficient use, unauthorized use, and vandalism of equipment.

7. Implement proper soil management practices such as proper aeration, nutrient management, mowing and soil testing.

8. Implement proper irrigation management practices to prevent overwatering, flooding, pooling, evaporation, and runoff.

9. Implement water use and management practices to protect water quality by preventing organic matter, phosphorus, nitrogen and pathogens from leaching into groundwater or from entering local surface waters with stormwater runoff.

10. Install flow check valves on troughs to reduce waste and overflow.

11. Minimize surface area of stock water tanks/ ponds to reduce evaporative losses.

12. Notify all employees of User Conservation Plan and provide notification of drought stage declarations.

13. Periodically review and evaluate this conservation plan and implement District-approved revisions to the plan as necessary.

_____ B. Commercial/Institutional/Other Use

(Initial Here)

1. General Facility Management

a. Periodically review and evaluate this conservation plan and implement revisions to the plan as necessary.
b. When possible, consider alternative water supplies including but not limited to rainwater collection and alternative irrigation strategies to improve conservation of water on site.
c. Maintain record of submitted meter readings as record for future determination of possible system leaks and to quantify success of conservation practices and steps for usage reduction during drought conditions.
d. Set system conservation goals for overall water use reductions and develop policies to monitor, mediate and enforce compliance with this User Conservation Plan.
e. Implement general prohibition on water wasting activities or practices. During staff meetings and when appropriate, suggest ways for employees to reduce water consumption in order to promote and encourage voluntary conservation measures. Require employees to report any water wasting practices and all faulty fixtures or leaks to maintenance for repair.
f. Require water efficient internal recycling equipment and air cooled equipment for cooling systems in any new construction and in retrofits where feasible.
g. Implement water reuse from sources such as air conditioner condensate, treated effluent, and collected stormwater where feasible.
h. Implement submetering for systems with multiple buildings and uses to account for water usage.
i. Assist District in the distribution of conservation and educational materials or post signs at all faucets, sinks, outdoor spigots, and other water sources reminding employees to use water wisely.
j. Implement an on-going program of system leak detection and repair which shall include the consideration and utilization of improved technology when possible.
k. Require low flow/low volume fixtures, HET toilets, and water efficient appliances to be installed in all new construction or retrofits.

2. Outdoor Measures – Landscape Irrigation

a. Utilize water efficient landscape practices such as water-wise landscape design and drip irrigation for new turf and landscaping.
b. When planning to replace turf and landscape plants, convert high water use turf and landscapes to native and water-wise designs for existing turf and landscaping.
c. Select vegetation from the list of appropriate native and naturalized plants compiled by the Lady Bird Johnson Wildflower Center when installing new or replacing landscape vegetation.
d. Implement a watering schedule endorsed by the District that includes watering restrictions for hose-end and underground irrigation systems.
e. Adopt a 2 day/week or every-5th day schedule for lawn watering and always only water between 8pm and 8am.
f. Maximize efficient operation of automatic sprinkler systems:
    1) frequently adjusting controllers based on conditions
    2) check sprinkler heads regularly to prevent clogging or replace broken heads
    3) adjust to eliminate overspray
    4) installing rainwater shutoff devices, smart clocks and controllers
    5) adjust run times and frequency monthly to respond to and changing rainfall and temperature conditions.
g. Use hand held hose, drip irrigation, or soaker hoses for trees, garden, non-turf areas and bedded plants.
h. Avoid watering on windy days.
i. Cut lawns on highest setting and leave lawn clippings on lawn instead of bagging.
j. For hose-end sprinklers - use sprinkler timers to limit water duration.
k. Use mulch to conserve soil moisture.
l. Irrigation of lawn areas with hose-end sprinklers or automatic irrigation systems shall be manually set to follow a 2 day/week watering schedule between the hours of 8pm and 8am

m. Use hand-held hose, drip irrigation, or soaker hoses for trees, garden, non-turf areas and bedded plants during designated water days and times.
n. Use of soaker hoses for foundation protection shall be limited to designated water days and times

3. Outdoor Measures – Vehicle Washing

a. Vehicle washing should be avoided except when conducted with a bucket or hand-held hose with an automatic shutoff device during designated watering days and times (if possible, use a commercial car wash that recycles water).
b. Wash vehicles over lawn areas where possible.

4. Outdoor Measures – Pools and Fountains

a. Use a cover on swimming pools when possible to minimize evaporative loss of water.
b. Limit pool filter backwashing to only when necessary.
c. Utilize supplemental water sources where possible (e.g. purchased water, collected rainwater, etc.).
d. Filling or refilling of pools is strongly discouraged. Topping off of existing pools for essential maintenance purposes is acceptable only during designated watering days and times.
e. Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.

5. Non-essential Uses

The following uses of water are considered as non-essential and should be avoided when possible:

a. wash down of any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
b. use of water to wash down buildings or structures for purposes other than immediate fire protection;
c. use of water for dust control;
d. flushing gutters or permitting water to run or accumulate in any gutter or street;
e. failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s); and any waste of water.

_____ C. Industrial Use

(Initial Here)

1. General Facility Management

a. Periodically review and evaluate this conservation plan and implement revisions to the plan as necessary.
b. When possible, consider alternative water supplies including but not limited to rainwater collection and alternative irrigation strategies to improve conservation of water on site.
c. Maintain record of submitted meter readings as record for future determination of possible system leaks and to quantify success of conservation practices and steps for usage reduction during drought conditions.
d. Set system conservation goals for overall water use reductions and develop policies to monitor, mediate and enforce compliance with this User Conservation Plan.
e. Implement general prohibition on water wasting activities or practices. During staff meetings and when appropriate, suggest ways for employees to reduce water consumption in order to promote and encourage voluntary conservation measures. Require employees to report any water wasting practices and all faulty fixtures or leaks to maintenance for repair.
f. Require water efficient internal recycling equipment and air-cooled equipment for cooling systems in any new construction and in retrofits where feasible.
g. Implement water reuse from sources such as air conditioner condensate, treated effluent, and collected stormwater where feasible.
h. Implement submetering for systems with multiple buildings and uses to better account for water usage.
i. Assist District in the distribution of conservation and educational materials or post signs at all faucets, sinks, outdoor spigots, and other water sources reminding employees to use water wisely.
j. Implement an on-going program of system leak detection and repair which shall include the consideration and utilization of improved technology when possible.
k. Require low flow/low volume fixtures, HET toilets, and water efficient appliances to be installed in all new construction or retrofits.

2. Outdoor Measures – Landscape Irrigation

a. Utilize water efficient landscape practices such as water-wise landscape design and drip irrigation for new turf and landscaping.
b. When planning to replace turf and landscape plants, convert high water use turf and landscapes to native and water-wise designs for existing turf and landscaping.
c. Select vegetation from the list of appropriate native and naturalized plants compiled by the Lady Bird Johnson Wildflower Center when installing new or replacing landscape vegetation.
d. Implement a watering schedule endorsed by the District that includes watering restrictions for hose-end and underground irrigation systems.
e. Adopt a 2-day/week or once/5-day schedule for lawn watering and always only water between 8pm and 8am.
f. Maximize efficient operation of automatic sprinkler systems:
    1) frequently adjusting controllers based on conditions
    2) check sprinkler heads regularly to prevent clogging or replace broken heads
    3) adjust to eliminate overspray
    4) installing rainwater shutoff devices, smart clocks and controllers
    5) adjust run times and frequency monthly to respond to and changing rainfall and temperature conditions.
g. Use hand-held hose, drip irrigation, or soaker hoses for trees, garden, non-turf areas and bedded plants.
h. Avoid watering on windy days.
i. Cut lawns on highest setting and leave lawn clippings on lawn instead of bagging.
j. For hose-end sprinklers - use sprinkler timers to limit watering duration.
k. Use mulch to conserve soil moisture.
l. Irrigation of lawn areas with hose-end sprinklers or automatic irrigation systems shall be manually set to follow a 2 day/week or every-5th day watering schedule between the hours of 8pm and 8am

m. Use hand-held hose, drip irrigation, or soaker hoses for trees, garden, non-turf areas and bedded plants during designated water days and times.
n. Use of soaker hoses for foundation protection shall be limited to designated water days and times

3. Outdoor Measures – Vehicle Washing

a. Vehicle washing should be avoided except when conducted with a bucket or hand-held hose with an automatic shutoff device during designated watering days and times (if possible, use a commercial car wash that recycles water).
b. Wash vehicles over lawn areas where possible.

4. Outdoor Measures – Pools and Fountains

a. Use a cover on swimming pools when possible to minimize evaporative loss of water.
b. Limit pool filter backwashing to only when necessary.
c. Utilize supplemental water sources where possible (e.g. purchased water, collected rainwater, etc.).
d. Filling or refilling of pools is strongly discouraged. Topping off of existing pools for essential maintenance purposes is acceptable only during designated watering days and times.
e. Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.

5. Non-essential Uses

The following uses of water are considered as nonessential and should be avoided when possible:

a. wash down of any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
b. use of water to wash down buildings or structures for purposes other than immediate fire protection;
c. use of water for dust control;
d. flushing gutters or permitting water to run or accumulate in any gutter or street;
e. failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s); and any waste of water.

_____ D. Irrigation Use

(Initial Here)

This category of water use pertains to irrigation of large non-agricultural areas such as golf courses, athletic fields, and common areas of community developments; it does not relate to lawn and landscape irrigation of individual residences, although some of the conservation measures are essentially similar.

User Conservation Plan Checklist - Irrigation Water Use

Provide a descriptive statement that addresses each of the requirements.

Requirement	Details
1. Description of Irrigation Use Process	Describe overall irrigation processes including all water sources, overall distribution, and turf/vegetation type and irrigation area.
2. Description of Irrigation Method or System	Describe the existing irrigation system including system layout and design, specifics on the control system, controllers, valves, and irrigation heads, and average run times.
3. Measuring Device/Water Accounting	Describe the methods or devices which will be used to measure and account for water used for irrigation including all meter locations within the system.
4. Specific 5- and 10-Year Water Conservation Goals	Describe specific 5- and 10-year water conservation goals for the site.
5. Water Conserving Irrigation Equipment and Operations	Describe all water conserving equipment and operations utilized including specifics on turf grass and landscaping management practices.
6. Irrigation System Monitoring and Maintenance	Describe all irrigation system maintenance and monitoring practices used to insure optimum performance including leak detection and repair, and equipment and system maintenance regimes.
7. Irrigation Testing and Scheduling	Describe all irrigation testing and scheduling procedures including scheduling procedures to be utilized in the application of water (night/day), and winterization and spring startup procedures.
8. Equipment Upgrades	Describe any and all equipment upgrades installed in the last two years.
9. Future Conversions	Describe any future plans to incorporate additional water conserving equipment and operations.
10. Alternative Water Supplies	Describe alternative water supplies being utilized on site including any direct reuse and/or recycling practices.

_____ E. Public Water Supply

(Initial Here)

1. Conservation Measures Relating to Retail Customers

a. Promote and encourage installation and use of water saving plumbing fixtures in existing homes. Promotion will take place through information mail outs and/or distribution of water saving devices.
b. Promote the replacement of water using appliances with more water efficient varieties. Promotion will take place through mail outs and creation of incentive programs.
c. Promote customer household leak detection and repair.
d. Promote and encourage water efficient landscape practices such as water-wise landscape design and drip irrigation for new turf and landscaping. Promotion will take place through mail outs and creation of incentive programs.
e. Promote and encourage conversion of high water-use turf and landscapes to native and water-wise designs for existing turf and landscaping. Promotion will take place through mail outs and creation of incentive programs.
f. Implement a watering schedule that limits landscape irrigation to no more frequently than once every 5 days or every-5th day, and to only between the hours of 8 pm and 8 am, unless the TCEQ tariff specifies use of different hours.
g. Encourage and promote minimum soil depth (6" or greater) for new residential turf and landscaping.
h. Send notices at the start and end of the District Water Conservation Period to remind customers to check, repair, and make adjustment to automatic sprinkler systems as necessary.
i. Require dedicated irrigation meters for all new industrial and commercial customers.
j. Assist customers with automatic sprinkler systems by providing information and materials on conducting irrigation audits and efficient operation of the sprinkler system to avoid waste (adjustment of controllers, installation of rainwater shutoff devices, etc.).

2. Conservation Measures Relating to System Operations

a. Conduct periodic system water audits and system water loss assessment to determine illegal connections, abandoned services, etc. Use results to revise meter testing and repair practices, reduce unauthorized water use, improve accounting for unauthorized water use, and implement effective water loss management strategies.
b. Implement and continue an on-going program of system leak detection and repair, which shall include the consideration and utilization of improved technology when possible. Cut off vacant houses; verify there are no leaks.
c. Monitor high usage customers and provide additional support and encouragement to promote efficient and effective use and to reduce wasteful practices.
d. Limit flushing of dead-end mains and fire hydrants.
    1) Dead-end mains - drain only as needed to prevent stale water and/or customer complaints.
    2) Fire hydrants - open twice yearly to maintain proper operation.
e. In next rate case for consideration by the Texas Commission on Environmental Quality (TCEQ), consider implanting a conservation-oriented rate structure which may include conservation oriented amendments to the tariff to include authorization to implement temporary water rates, the assessment of surcharges to encourage water conservation, and other available measures to encourage water conservation.
f. Require applicants for service to comply with the permittee rules, plans, and regulations as approved by the District and the TCEQ.
g. Continue customer meter testing and meter repair and replacement programs. Set a goal of achieving accuracy of within plus or minus 5.0% in order to measure and account for the amount of water diverted from the source of supply.
h. Implement system-wide prohibition on water waste. Enforce prohibitions with applicable authority, including citations or notices to violators. Set up a special water waste line that will be listed on the billings. Follow up and investigate calls.

3. General Conservation Measures

a. Develop five-year and ten-year targets for water savings. Include goals for water loss programs and for municipal use (in gallons per capita per day).
b. Promote and encourage voluntary indoor and outdoor conservation measures through examples at Company office(s).
c. Include drought stage and conservation information in customer billings. Include historic water use and customer water use comparisons in customer billings.
d. Assist the District in the distribution of conservation and educational materials.
e. Periodically review and evaluate this conservation plan and implement revisions to the plan as necessary.

4. Plan Adoption & Enforcement Procedure

The User Conservation Plan must include a means of implementation and enforcement which shall be evidenced by 1) a copy of the ordinance, regulations, resolution, contractual agreements, or tariff indicating official adoption of the water conservation plan by the water supplier; and 2) a description of the authority by which the water supplier will implement and enforce the conservation plan.

Section IV. Monthly Groundwater Use with Conservation Measures During Non-Drought

The Permitholder warrants that it agrees the following monthly allocations of authorized annual use are reasonable and it will use best efforts to implement applicable provisions of this UCP to achieve them. The permitholder understands these allocations are before any declared-drought curtailments are applied:

Monthly Non-Drought Volumes (multiply "Percent of Annual" shown by Authorized Annual Use at top of first page)

Month	Percent of Annual	Monthly Amount		Month	Percent of Annual	Monthly Amount
October	7.62	226,947		April	9.15	272,548
November	4.77	142,107		May	11.10	330,875
December	3.84	114,534		June	12.42	370,114
January	3.95	117,715		July	12.56	374,356
February	4.73	141,046		August	12.63	376,477
March	7.54	224,826		September	9.68	288,456
					100.00%	2,980,000

Percent of Annual values are monthly averages based on historical metered-volume records and best estimates by permitholder. Monthly Amount is calculated by correcting the average monthly percentages specific to the permitholder and applying those to the annual permit amounts. (The percentages currently shown in the table are simply default averages based mostly on seasonal water-use factors and generally may not represent the water-use profile of an individual permitholder.) **The corrected average-percentages and calculated values must be entered by the permitholder before the UCP is submitted for approval.**

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SITE PLANNING

DEVELOPMENT CONSULTING

LAND USE PLANNING

LANDSCAPE ARCHITECTURE

PRESENTATION GRAPHICS

SW Travis County Groundwater Conservation District
User Conservation Plan

Project Name: Ledgestone Flats **aka Citizen House Ledgestone**
Address: 9303 Ledgestone Terrace - Austin , Texas 78737
Client: Endeavor Real Estate Group
Date: July 1, 2025

Landscape Architect's Name and Address
Kendrick Yeh, RLA
Artis, Inc.
1405 W Koenig Lane
Austin, Texas 78756

The Ledgestone Flats in Austin plan to use well water as the primary source for a permanent, automated irrigation system. This approach not only reduces reliance on municipal water supplies but also supports long-term sustainability goals. The irrigation system has been thoughtfully designed with numerous conservation-focused best practices and in conjunction with the use of native and drought-tolerant plant species—carefully selected for their adaptability to the Central Texas climate—this integrated strategy is expected to significantly reduce water waste and promote responsible stewardship of natural resources.

In accordance with local rules and regulations, the proposed landscape planting and irrigation design prioritizes water conservation incorporating efficient irrigation strategies, the use of drought-tolerant and regionally adapted plant species, and best management practices to reduce water consumption while maintaining a healthy, visually appealing environment.

1. Irrigation for the Ledgestone Flats utilizes a single-source system, with the property's primary water supply coming from an on-site well. The well will pump groundwater into a dedicated supplemental supply tank, which in turn feeds the irrigation system via a variable frequency drive (VFD) irrigation pump. This configuration stabilizes water pressure, minimizes pump cycling, and ensures consistent and efficient water delivery across all irrigation zones. Outside of this water source, the landscape must depend solely on natural precipitation. Once fully established, the native and adapted plantings are expected to thrive even with reduced supplemental watering. Irrigated areas include common use areas, private yards, foundation plantings, and enhanced landscaping around amenity areas. The selected turfgrass for this property, DT-1 Bermuda sod, is a high-performance variety known for its exceptional drought tolerance and durability. Compared to previous bermudagrass cultivars, DT-1 establishes more quickly, retains green color longer into the fall, and performs better under prolonged dry conditions with limited or no irrigation. The overall design aesthetic focuses on restoring the site to its native condition, with particular emphasis on revegetating areas disturbed by grading using native and regionally adapted plant species tailored to the site's specific solar exposure and drainage patterns.

2. Irrigation is distributed through a closed-loop, pressurized mainline system that supplies water to multiple automated valve zones across the site. These valves are controlled by a central master controller, programmed according to WaterSense guidelines that emphasize deep, infrequent irrigation. Watering schedules are set to run during optimal periods—primarily at night or early morning—to reduce evapotranspiration, with no irrigation occurring during midday.

3. A meter will be installed on both the well and the irrigation pump to monitor and record water usage. Additionally a flow meter will be installed down stream of the irrigation pump to enable real-time monitoring through the integrated irrigation controller to help facilitate automated tracking, leak detection, and system performance analysis.

4. The 5-year and 10-year goals include reducing overall irrigation water use through the implementation of smart irrigation controllers and soil moisture sensors. Once established, drought-tolerant native or adapted plant species are expected to significantly reduce irrigation demand over the lifespan of the project. The irrigation system is designed to achieve 90% efficiency by conducting annual maintenance, leak detection, and timely repairs. Additionally, all maintenance staff are expected to receive training on water-efficient irrigation practices and system operation.

5. The primary water conservation strategy implemented on-site is the utilization of native and adapted plant species, coupled with the minimization of turfgrass wherever feasible. A secondary measure involves the deployment of an Evapotranspiration (ET) controller, which operates based on site-specific data, including inputs from a rain/freeze sensor and an anemometer that effectively suspend irrigation during precipitation events and overrides any above-ground irrigation during periods of high winds and/or freezing temperatures to optimize water usage.

6. The irrigation system is specifically designed to conserve water through high-efficiency system design and advanced equipment. From an infrastructure standpoint, all planting beds are irrigated using pressure-compensating dripline, while trees are irrigated with multi-stream bubblers. Turfgrass areas utilize spray heads and rotors with matched precipitation rates to ensure uniform water distribution. The ET controller, supported by on-site sensors and global weather data, suspends irrigation during high-wind and precipitation events. Additionally, the controller features seasonal programming to adjust irrigation schedules according to varying water needs throughout the year. A flow sensor monitors water usage and will alert the controller if flow rates exceed or fall below preset thresholds, automatically suspending irrigation and notifying maintenance personnel of the issue to avoid water waste.

7. A qualified professional landscape maintenance operator will be engaged to oversee and facilitate all aspects of landscape maintenance and irrigation system monitoring. This individual will be responsible for ensuring that all plant materials are maintained according to horticultural best practices and that the irrigation system operates at peak efficiency. Duties will include routine inspection and adjustment of irrigation components, monitoring system performance through real-time data, identifying and addressing inefficiencies or malfunctions, and coordinating seasonal tasks such as winterization and spring startup. The operator will also provide documentation of maintenance activities and assist in implementing water conservation strategies in alignment with the site's long-term sustainability goals.

8. All irrigation system components are current, high-performance models sourced from leading industry manufacturers known for their innovation, reliability, and water-efficient technologies. This includes state-of-the-art controllers, precision sprinkler heads, pressure-compensating dripline, and advanced sensors for weather, soil moisture, and flow monitoring. The use of top-tier equipment ensures optimal system efficiency, long-term durability, and compatibility with future technology upgrades, thereby supporting the project's water conservation and sustainability goals.

9. Upgrades to the Evapotranspiration (ET) controller's user interface will be implemented on a regular basis to ensure compatibility with the latest advancements in irrigation technology. As equipment manufacturers release updates to their software and operational protocols, the system will be updated accordingly to maintain optimal performance, enhance usability for on-site personnel, and ensure integration with emerging tools such as mobile monitoring apps, advanced weather forecasting models, and real-time data analytics. These upgrades will support continuous improvement in water management efficiency, system responsiveness, and user accessibility.

10. No alternative water sources are currently employed for this property aside from natural precipitation. Irrigation and landscape water requirements shall rely solely on rainfall during any amount of time when the well is not operational.

In summary, the landscape and irrigation design at the Ledgestone Flats is thoughtfully attuned to the fragility of the native Hill Country aquifer and reflects a strong commitment to native habitat restoration and water conservation. The integrated strategies employed on-site not only help prevent unnecessary depletion of the aquifer but also promote long-term ecological resilience and support biodiversity throughout the landscape.

Kendrick Yeh – Texas Irr. #23608 / RLA #3051





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User Drought Contingency Plan

SOUTHWESTERN TRAVIS COUNTY GROUNDWATER CONSERVATION DISTRICT

8656 Highway 71 West, Building A, Suite 224, Austin TX 78735 · Tel. 512-276-2875 · www.swtcgcd.org

Permitholder: OP III ATX Ledgestone I, LP

Permitted Type of Water Use(s): Operating Permit, Non-agricultural Uses

Registered Well Identification Number(s): 58492OP2

Authorized Annual Groundwater Use Under Permit (gallons): 2,980,000

Monthly distribution of authorized use during non-drought and drought is to be tabulated in Section 6.

The permittee named above has adopted this User Drought Contingency Plan (UCP) as required by the Southwestern Travis County Groundwater Conservation District of each Permitholder and agrees to comply with all the applicable District Rules in implementing and enforcing the measures of the enclosed plan. The Permitholder will provide a signed copy of the final UDCP to the District.

Permittee Signature: _____ **Date:** _____

Accepted:

_____ _____

(Signature of District General Manager) (Date)

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Section 1. Background and Purpose of Plan

The Southwestern Travis County Groundwater Conservation District (District) manages all groundwater resources in its jurisdictional area under the authority granted under Chapter 36 of the Texas Water Code and the District's enabling legislation. Conservation and Drought Contingency planning are among the management goals the District must include in its Management Plan that is approved by the Texas Water Development Board no less than every five years. District Rule 3.4(A)(5)(d) requires adoption and implementation of User Drought Contingency Plans (UDCPs) for all well owners/operators that are authorized to use groundwater under Operating Permits issued by the District, and District Rules 3.5(B)(3) and 3.5(D)(3) require adoption and implementation of UDCPs for all well owners/operators that are authorized to use groundwater under certain General Permits issued by the District. The UDCP is complementary to the separate User Conservation Plan (UCP) that is also a requirement of each District Permitholder.

This UDCP (Plan) sets forth use-specific guidelines for achieving mandatory curtailments of groundwater during each of the stages of drought that may be declared by the District as described in Rule 5.2(B). While it is the effort through conservation to prevent drought conditions, it is integral to the wise management of the resource to plan for this contingency in this manner. Notification of drought will occur through direct notice from the District, in addition to community notification through public notice, the District website, and other means. The Plan is not designed to punish, stigmatize, or criticize anyone about their usage of water. Its sole intent is to maintain an adequate supply of groundwater for all users, especially during the various stages of drought that may occur from time to time.

The Plan is being implemented by the Permittee to help achieve significant reductions in water usage through drought-triggered water use restrictions and voluntary efforts. Implementation of voluntary water conservation measures and conscientious water use practices are encouraged at all times; however, additional water use restrictions are required in cases of extreme drought, periods of abnormally high usage, well system contamination, or extended reduction in ability to supply water due to equipment failure. During drought, these efforts, if sufficiently effective as designed to be, may delay the depletion of aquifer water levels until sufficient recharge is available to replenish the aquifer(s). Should drought conditions reach more severe levels, the permittee has planned and is prepared to restrict further or curtail certain types of usage.

Section 2. Drought Notice

The District will notify permittees of the implementation or termination of each stage of the water restriction program. Permittees must then inform all facility personnel, customers, and/or tenants prior to implementation or termination of each stage of the water restriction program. Notice of the District declaration must be provided at least 72 hours prior to the start of water use restrictions. Notice posted onsite at the facility should contain the following information:

- the date restrictions will begin
- the circumstances that triggered the restrictions
- the stages of response and explanation of the restrictions to be implemented

Upon notification of a Drought stage declaration by the District, the permittee will activate the respective response measures of its UDCP. The Permittee will perform the recommended and mandatory actions specified in this UDCP. The Permittee will curtail pumpage according to the following curtailment schedule:

D-0 Abnormally Dry	0% curtailment	No mandatory curtailment; use groundwater wisely
D-1 Moderate Drought	10% voluntary curtailment	No mandatory curtailment; prepare for required reductions
D-2 Severe Drought	20% mandatory curtailment	Additional curtailments possible per-well by Board order
D-3 Extreme Drought	30% mandatory curtailment	Additional curtailments possible per-well by Board order
D-4 Exceptional Drought	40% mandatory curtailment	Additional curtailments possible per-well by Board order

Section 3. Alternate Water Sources

The permittee has identified one or more alternate water sources or other contingency to be utilized or implemented directly by the permittee to manage restricted water supplies in the event of water supply contamination, prolonged system outage, or problematic permit curtailments. **For Public Water Supply providers (only): if no alternate water sources are identified, provide a descriptive explanation on a separate appended sheet as to why and generally how the water demand will be accommodated.**

The current available water sources and alternate contingency sources for the Permittee include:

Source A: None Available
Source B: _____

Section 4. Facility Information

The permittee will at least annually, or more frequently as warranted, provide facility staff, employees, personnel and/or ranch hands/managers with information about this Plan, including information about the conditions under which each stage of the plan is to be initiated or terminated, and the drought response measures to be implemented in each stage. This information will be provided by means such as employee training/meetings, via email, websites, or print notice. Permittee must notify facility personnel and/or grounds maintenance crews of the initiation or termination of drought responses stages. Documentation of these efforts shall be kept by the Permittee for record and provided to the District upon request.

Section 5. Enforcement Procedures

The UDCP must include a means of implementation and enforcement in accordance with District Rule 5.2(D). Specifically, each permittee must: 1) develop and implement procedures for enforcing this UDCP, and 2) inform Permittee customers or facility personnel of the intent to enforce the measures of the UDCP.

Section 6. Drought Stage Triggers and General Responses

The monthly amounts shown in the table below, once established per instructions immediately below the table, are estimates of authorized monthly use during non-drought conditions, i.e., non-curtailed use). **These amounts form the basis for further reductions in authorized use during drought stages by its designated curtailment percentage**.

Monthly Non-Curtailed Volumes (Permitholder will adjust and complete this table before submitting UDCP)

Month	Percent of Annual	Monthly Amount		Month	Percent of Annual	Monthly Amount
October	7.62	226,947		**April**	9.15	272,548
November	4.77	142,107		**May**	11.10	330,875
December	3.84	114,534		**June**	12.42	370,114
January	3.95	117,715		**July**	12.56	374,356
February	4.73	141,046		**August**	12.63	376,477
March	7.54	224,826		**September**	9.68	288,456
					100.00%	**2,980,000**

The "Percent of Annual" values shown in this table are monthly averages based on historical metered-volume records and/or best estimates by permitholder. (The percentages currently shown in the table are simply default averages based mostly on seasonal water-use factors and generally may not represent the actual water-use profile of the individual permitholder.) The "Monthly Amount" is to be calculated by the Permitholder by correcting the adjusted average monthly percentages per month and applying them to the Authorized Annual Use at the top of the first page of the UDCP. **The corrected monthly-average percentages and their calculated monthly values must be entered by the permitholder before the UDCP is submitted for approval.**

A. Stage D-1 Moderate Drought

INITIATION:
The Permittee will recognize that Stage D-1 Moderate Drought exists upon receiving notification from the District that the District has declared the aquifer to be in a Stage D-1 Moderate Drought; the permittee will activate the Stage D-1 Moderate Drought measures of its UDCP, including those in this subsection and those use-specific measures in appropriate section of the Appendix.

TERMINATION:
The Permittee will recognize that Stage II Alarm Drought may be rescinded upon receiving notification from the District that the District has declared Stage D-0 Abnormally Dry Conditions or has declared a different drought stage.

MANDATORY ACTIONS:
No mandatory monthly-use curtailment; voluntary 10% quarterly reduction targeted. Prepare for required mandatory actions specified in UDCP for a possibly upcoming more-severe drought stage.

RESPONSE MEASURES DURING THIS STAGE:

- Continue measures listed in permitholder's User Conservation Plan.
- Implement use reduction measures for this stage identified in Rule 5.2(C)(1) and additional drought measures in the water-use specific part of the Appendix applicable to the Permitholder.
- Ensure all meters throughout the facility are working and calibrated to accurately gauge compliance with monthly curtailments in the future.
- Conduct a monthly Leak Detection Survey and immediately repair all identified leaks in the system.
- Monitor any construction activity and require contractors to report line breaks immediately or shutoff flow if possible.
- Employee personnel and system operators should regularly monitor the facility and service areas for occurrences of waste or excessive usage.
- Implement employee and personnel awareness efforts by providing training and placing signage in visible places throughout the onsite facility to inform employees of the prospective drought stage.
- Deploy and utilize the District's drought-stage terminology correctly on all outreach signage, "Stage D-1 Moderate Drought".

B. Stage D-2 Severe Drought

INITIATION:
The Permittee will recognize that Stage D-2 Severe Drought exists upon receiving notification from the District that the District has declared the aquifer to be in a Stage D-2 Severe Drought; the permittee will activate the Stage D-2 Severe Drought measures of its UDCP, including those in this subsection and those use-specific measures in the appropriate section of the Appendix.

TERMINATION:
The Permittee will recognize that Stage D-2 Severe Drought may be rescinded upon receiving notification from the District that the District has declared Stage D-1 Moderate Drought or has declared a different drought stage.

MANDATORY ACTIONS:
Mandatory minimum 20% overall reduction in quarterly groundwater use.

RESPONSE MEASURES DURING THIS STAGE:

- Continue measures listed in User Conservation Plan.
- Implement use reduction measures for this stage identified in Rule 5.2(C)(2) and additional drought measures in the water-use specific part of the Appendix applicable to the Permitholder.
- Vehicle and equipment washing shall be limited to occur only when necessary to facilitate repair.
- The following uses of water are defined as nonessential and are prohibited:
    1. washing down of any sidewalks, walkways, driveways, parking lots, or other hard-surfaced areas
    2. using water to wash down buildings or structures for purposes other than immediate fire protection
    3. failing to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s) and
    4. any obvious waste of water.
- The use of groundwater for dust control shall be limited to the amount required for mandatory regulatory compliance set forth in the TCEQ air authorization(s) for the site.
- Monitor for occurrences of wasteful use on continuous basis.
- All meters throughout the facility shall be read as often as necessary to ensure compliance with monthly curtailments.
- Conduct a monthly Leak Detection Survey and immediately repair all identified leaks in the system.
- Monitor any construction activity and require contractors to report line breaks immediately or shutoff flow if possible.
- Employee personnel and system operators should regularly monitor the facility and service areas for occurrences of waste or excessive usage.
- Implement employee and personnel awareness efforts by providing training and placing signage in visible places throughout the onsite facility to inform employees of the prospective drought stage.
- Deploy and utilize the District's drought-stage terminology correctly on all outreach signage, "Stage D-2 Severe Drought".

C. Stage D-3 Extreme Drought

INITIATION:
The Permittee will recognize that Stage D-3 Extreme Drought exists upon receiving notification from the District that the District has declared the aquifer to be in a Stage D-3 Extreme Drought; the permittee will activate the **Stage D-3 Extreme Drought** measures of its UDCP, including those in this subsection and those use-specific measures in the appropriate section of the Appendix of this Plan.

TERMINATION:
The Permittee will recognize that Stage D-3 Extreme Drought may be rescinded upon receiving notification from the District that the District has declared Stage D-2 Severe Drought or has declared a different drought stage.

MANDATORY ACTIONS:
Mandatory minimum 30% overall reduction in quarterly groundwater use.

RESPONSE MEASURES DURING THIS STAGE:

- Continue measures listed in User Conservation Plan.
- Implement use reduction measures for this stage identified in Rule 5.2(C)(3) and additional drought measures in the water-use specific part of this Plan's Appendix applicable to the Permitholder.
- Vehicle and equipment washing shall be limited to occur only when necessary to facilitate repair.
- The following uses of water are defined as nonessential and are prohibited in this stage:
  1. wash down of any sidewalks, walkways, driveways, parking lots, or other hard-surfaced areas
  2. use of water to wash down buildings or structures for purposes other than immediate fire protection
  3. failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s),
  4. use of automatic in-ground irrigation systems or unattended hose-end sprinklers for lawn and landscape irrigation. and
  5. any obvious waste of water.
- The use of groundwater for dust control shall be limited to the amount required for mandatory regulatory compliance set forth in the TCEQ air authorization(s) for the site.
- Monitor for occurrences of wasteful use on a continuing basis.
- All meters throughout the facility shall be read as often as necessary to ensure compliance with monthly curtailments.
- Conduct a monthly Leak Detection Survey and immediately repair all identified leaks in the system.
- Monitor any construction activity and require contractors to report line breaks immediately or shutoff flow if possible.
- Employee personnel and system operators should regularly monitor the facility and service areas for occurrences of waste or excessive usage.
- Implement employee and personnel awareness efforts by providing training and placing signage in visible places throughout the onsite facility in order to inform employees of the prospective drought stage.
- Deploy and utilize the District's drought-stage terminology correctly on all outreach signage, "Stage D-3 Extreme Drought".

D. Stage D-4 Exceptional Drought

INITIATION:
The Permittee will recognize that Stage D-3 Extreme Drought exists upon receiving notification from the District that the District has declared the aquifer to be in a Stage D-3 Extreme Drought; the permittee will activate the Stage D-3 Extreme Drought measures of its UDCP, including those in this subsection and those use-specific measures in the appropriate section of the Appendix.

TERMINATION:
The Permittee will recognize that Stage D-3 Extreme Drought may be rescinded upon receiving notification from the District that the District has declared Stage D-2 Severe Drought or has declared a different drought stage.

MANDATORY ACTIONS:
Mandatory minimum 40% overall reduction in quarterly groundwater use.

RESPONSE MEASURES DURING THIS STAGE:

- Continue measures listed in User Conservation Plan.
- Implement use reduction measures for this stage identified in Rule 5.2(C)(4) and additional drought measures in the water-use specific part of the Appendix applicable to the Permitholder.
- Vehicle and equipment washing shall be limited to occur only when necessary to facilitate repair.
- The following uses of water are defined as nonessential and are prohibited:
    1. wash down of any sidewalks, walkways, driveways, parking lots, or other hard-surfaced areas
    2. use of water to wash down buildings or structures for purposes other than immediate fire protection
    3. failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s)
    4. use of automatic in-ground irrigation systems or unattended hose-end sprinklers for lawn and landscape irrigation
    5. washing cars or vehicles by hand except with bucket and hose-end nozzle with auto-shut off
    6. filling or topping up pools and ponds, and
    7. any obvious waste of water.
- The use of groundwater for dust control shall be limited to the amount required for mandatory regulatory compliance set forth in the TCEQ air authorization(s) for the site.
- Monitor for occurrences of wasteful water use on a continuing basis.
- All meters throughout the facility shall be read as often as necessary to ensure compliance with monthly curtailments.
- Conduct a monthly Leak Detection Survey and immediately repair all identified leaks in the system.
- Monitor any construction activity and require contractors to report line breaks immediately or shutoff flow if possible.
- Employee personnel and system operators should regularly monitor the service area for occurrences of waste or excessive usage.
- Implement employee and personnel awareness efforts by providing training and placing signage in visible places throughout the onsite facility in order to inform employees of the prospective drought stage.
- Deploy and utilize the District's drought-stage terminology correctly on all outreach signage, "Stage D-4 Exceptional Drought".

Appendix
Water Use-Specific Drought Measures

In addition to the UDCP's general responses identified in Section 6 of this Plan, the Permitholder has water use-specific drought measures to follow. **Accordingly, by initialing the appropriate subsection heading below for the type of use of groundwater under the permit (as designated in the descriptive info at the top of the first page of this Plan), the Permitholder selects, agrees to adopt, incorporates into its UDCP, and will make best efforts to follow these drought measures during declared drought.** Each permitholder should initial at least one of these types of water use. The Permitholder is also encouraged to consider and adopt additional drought stage-specific measures that are aligned with the individual permittee's circumstances, provided those are in addition to and not in lieu of those specifically identified in its UDCP.

_____ A. Agricultural Use

(Initial Here)

Recommended Agricultural Drought Stage Measures

Agricultural Irrigation

- Avoid watering on windy days
- Irrigate only between the hours of 8:00 p.m. and 5:00 a.m.
- Use efficient Low-Pressure Center Pivot (LPCP) Irrigation Systems (80% efficiency or higher) such as Low Energy Precision Application (LEPA), Low Elevation Spray Application (LESA), Low Pressure in Canopy (LPIC), or Mid Elevation Spray Application (MESA).
- Low pressure center pivot and linear sprinkler irrigation systems are more water efficient and energy efficient than high pressure systems.
- Where applicable, consider using sub-irrigation systems or using ebb and flood or capillary matt irrigation technologies that incorporate water capture and reuse systems for additional water conservation.
- Line irrigation canals with materials such as concrete, plastic liners, or geomembranes or replace with pipeline.
- Install furrow dikes where possible to reduce runoff and increase infiltration of water.
- Use soil cultivation techniques such as spiking, slicing and core aerification to improve water infiltration and minimize runoff during irrigation or rainfall events.
- Implement an irrigation schedule to ensure efficient and optimal application.
- An irrigation control system shall operate to achieve optimal irrigation efficiency of a crop field using on-site weather station inputs to determine minimum irrigation volumes. The irrigation system shall also be maintained in accordance with the manufacturer's specifications.
- An irrigation control system operated for agricultural irrigation shall have their controllers manually set to achieve optimal irrigation efficiency and to program runtimes to be consistent with recommended watering practices.
- Conduct regular irrigation audits to identify opportunities to improve water use efficiency.
- Implement crop residue management and conservation tillage to improve the ability of the soil to hold moisture, reduce runoff and evaporation of water from soil surface.
- Utilize supplemental water sources where possible (e.g., collected rainwater, etc.).
- Implement brush control/management where applicable.
- Utilize dry-land farming where possible (e.g. permanent pasture, grass seed and/or forage crop mix).
- Utilize water reuse where possible.

- Reference BMPs for Agricultural Water Users: https://www.twdb.texas.gov/conservation/BMPs/Ag/index.asp

Livestock Management

- Balance stocking rates with available forage
- Utilize supplemental water sources where possible (e.g., collected rainwater, etc.).
- Evaporative losses of rainfall can be reduced by maintaining sufficient plant cover to shade the soil surface.
- If applicable, use water efficient irrigation systems and/or reuse water for dust control.
- Avoid setting water troughs to overflow during winter months to prevent freezing.
- Utilize water reuse where possible.
- Properly distribute small ponds or troughs throughout grazing area.

Aquaculture/ponds

- Understand stock water requirements to minimize pond size.
- Minimize evaporative losses by designing and constructing reservoirs with smaller surface areas and greater depths.
- Locate ponds in areas that maximum the capture of runoff.
- Select sites for ponds where soils have high clay content to reduce seepage or place a pond liner over the pond bottom when clay soil is unavailable.
- Utilize nighttime aeration of ponds instead of daytime aeration to reduce evaporative loss.
- Fill ponds at night to reduce evaporative loss.
- Compact soils on the pond bottom and sides to reduce seepage.
- Maintain the pond water level several inches below drain pipes so spring and summer rain can be stored.
- Balance stocking rates with available water.
- Utilize supplemental water sources where possible (e.g. collected rainwater, etc.).
- Utilize water reuse where possible.

Permittee Actions:

- Post signs using District terminology at all faucets, sinks, outdoor spigots, and other water sources to remind visitors, customers, facility personnel, grounds maintenance crews and employees of the current drought stage curtailments (not an applicable requirement for residential irrigation).
- Inform employees or grounds maintenance crews of need to reduce water use.
- Monitor for occurrences of waste.
- Visually inspect lines and repair leaks on a regular basis.
- Monitor any construction activity and require contractors to report line breaks immediately or shutoff flow if possible.
- Evaluate system pressure needs and reduce pressure where excessively high.

The following uses of water are defined as **nonessential** and should be limited:

- wash down of any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas
- use of water to wash down buildings or structures for purposes other than immediate fire protection
- use of water for dust control unless required for mandatory regulatory compliance
- flushing gutters or permitting water to run or accumulate in any gutter or street
- failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s) and any waste of water.

_____ B. Commercial/Institutional/Other Use

(Initial Here)

Facility System Management

- Conduct a monthly Leak Detection Survey and immediately repair all identified leaks in the system.
- All meters throughout the facility shall be read as often as necessary to ensure compliance with monthly curtailments.
- Monitor any construction activity and require contractors to report line breaks immediately or shutoff flow if possible.
- Evaluate system pressure needs and reduce pressure where excessively high.
- Follow recommended irrigation BMPs for landscaping.
- Maximize process recycled water where possible.

Employee & Tenant Awareness

- Promote the water conservation BMPs listed in Appendix A through training website and print materials.
- Train employees and personnel on implementing recommended indoor water conservation BMPS.
- Implement employee personnel and tenant awareness efforts such as placing signage and/or posters in visible places (faucets, sinks, spigots, kitchens, restrooms, water storage areas etc) throughout the onsite facility in order to remind users of the prospective drought stage.
- Utilize the District's drought stages then utilize the correct terminology on all outreach signage, "Stage V Emergency Response Period Drought".

Permittee Initiated Penalties or Consequences

- Employee personnel and system operators should regularly monitor the service area for occurrences of waste or excessive usage.
- Permittee should install flow restrictors on connections with continued waste and excessive monthly consumption, or proscribed use.

Additional Recommended Drought Measures

Indoor Measures

- Visually inspect lines and repair leaks on a regular basis.
- Check for toilet and faucet leaks and repair any found leaks immediately.
- Use water displacement device in toilet tank or replace older model toilets with HET models when possible.
- Install aerators on faucets and water efficient appliances.
- While waiting for hot water to reach faucet, catch cold water in a container to be reused.
- Only run dishwashers with full load.
- Keep drinking water in a container in the refrigerator.
- Reduce use of garbage disposal.
- Wash only full loads of laundry.

Outdoor Measures – Landscape Irrigation

- Adopt a 2-day/week or every-5th day schedule for lawn watering and always only water between 8pm and 8am.
- For Automatic Sprinkler systems:
  - check sprinkler heads regularly to prevent clogging
  - adjust to eliminate overspray and
  - adjust run times and frequency monthly to respond to water schedules and changing rainfall and temperature conditions.
- Use hand held hose, drip irrigation, or soaker hoses for trees, garden, non-turf areas and bedded plants.

- Avoid watering on windy days.
- Cut lawns on highest setting and leave lawn clippings on lawn instead of bagging.
- For hose-end sprinklers - use sprinkler timers to limit water duration.
- Use mulch to conserve soil moisture.
- Irrigation of lawn areas with hose-end sprinklers or automatic irrigation systems shall be manually set to follow a 2 day/week or every-5th day watering schedule between the hours of 8pm and 8am
- Use hand-held hose, drip irrigation, or soaker hoses for trees, garden, non-turf areas and bedded plants during designated water days and times.
- Use of soaker hoses for foundation protection shall be limited to designated water days and times

Outdoor Measures – Power Washing or Vehicle Washing

- Vehicle washing should be avoided except when conducted with a bucket or hand-held hose with an automatic shutoff device during designated watering days and times (if possible, use a commercial car wash that recycles water).
- Wash vehicles over lawn areas where possible.
- No washing of driveways, sidewalks or streets.

Outdoor Measures – Pools and Fountains

- Keep pools covered when not in use.
- Limit pool filter backwashing to only when necessary.
- Utilize supplemental water sources where possible (e.g. purchased water, collected rainwater, etc.).
- Filling or refilling of pools is strongly discouraged. Topping off of existing pools for essential maintenance purposes is acceptable only during designated watering days and times.
- Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.

The following uses of water are defined as nonessential and should be avoided during drought:

- wash down of any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
- use of water to wash down buildings or structures for purposes other than immediate fire protection;
- use of water for dust control;
- flushing gutters or permitting water to run or accumulate in any gutter or street;
- failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s); and any waste of water.

_____ C. Industrial Use

(Initial Here)

Additional Recommended Drought Measures

Indoor Measures

- Visually inspect lines and repair leaks on a regular basis.
- Check for toilet and faucet leaks and repair any found leaks immediately.
- Use water displacement device in toilet tank or replace older model toilets with HET models when possible.
- Install aerators on faucets and water efficient appliances.
- While waiting for hot water to reach faucet, catch cold water in a container to be reused.
- Only run dishwashers with full load.
- Keep drinking water in a container in the refrigerator.
- Reduce use of garbage disposal.
- Wash only full loads of laundry.

Outdoor Measures – Landscape Irrigation

- Adopt a 2-day/week or every-5th day schedule for lawn watering and always only water between 8pm and 8am.
- For Automatic Sprinkler systems:
  - check sprinkler heads regularly to prevent clogging
  - adjust to eliminate overspray and
  - adjust run times and frequency monthly to respond to water schedules and changing rainfall and temperature conditions.
- Use hand held hose, drip irrigation, or soaker hoses for trees, garden, non-turf areas and bedded plants.
- Avoid watering on windy days.
- Cut lawns on highest setting and leave lawn clippings on lawn instead of bagging.
- For hose-end sprinklers - use sprinkler timers to limit water duration.
- Use mulch to conserve soil moisture.
- Irrigation of lawn areas with hose-end sprinklers or automatic irrigation systems shall be manually set to follow a 2 day/week or every-5th day watering schedule between the hours of 8pm and 8am
- Use hand-held hose, drip irrigation, or soaker hoses for trees, garden, non-turf areas and bedded plants during designated water days and times.
- Use of soaker hoses for foundation protection shall be limited to designated water days and times

Outdoor Measures – Power Washing or Vehicle Washing

- Vehicle washing should be avoided except when conducted with a bucket or hand-held hose with an automatic shutoff device during designated watering days and times (if possible, use a commercial car wash that recycles water).
- Wash vehicles over lawn areas where possible.
- No washing of driveways, sidewalks or streets.

Outdoor Measures – Pools and Fountains

- Keep pools covered when not in use.
- Limit pool filter backwashing to only when necessary.
- Utilize supplemental water sources where possible (e.g. purchased water, collected rainwater, etc.).
- Filling or refilling of pools is strongly discouraged. Topping off of existing pools for essential maintenance purposes is acceptable only during designated watering days and times.
- Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.

The following uses of water are defined as nonessential and should be avoided during drought:

- wash down of any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
- use of water to wash down buildings or structures for purposes other than immediate fire protection;
- use of water for dust control;
- flushing gutters or permitting water to run or accumulate in any gutter or street;
- failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s); and any waste of water.

_____ D. Irrigation Use

(Initial Here)

This category of water use pertains to irrigation of large non-agricultural areas such as golf courses, athletic fields, and common areas of community developments; it does not relate to lawn and landscape irrigation of individual residences, although some of the drought response measures are essentially similar.

Additional Recommended Drought Measures

Outdoor Irrigation

- Irrigation of a golf course or athletic fields - tees, greens, fairways, turf, landscape beds, playing fields, practice areas, driving ranges, and roughs - should be managed by an automatic irrigation control system.
- An irrigation control system shall operate to achieve optimal irrigation efficiency of a golf course or athletic fields using on-site weather station inputs to determine minimum irrigation volumes. The irrigation system shall also be maintained in accordance with the manufacturer's specifications.
- An irrigation control system operated for residential turf and landscape irrigation shall have their controllers manually set to achieve optimal irrigation efficiency and to program runtimes to be consistent with recommended watering practices.
- The irrigation system shall also be maintained in accordance with the manufacturer's specifications.
- Irrigate only between the hours of 8:00 p.m. and 5:00 a.m.

Turfgrass Management and Irrigation

- Avoid watering on windy days.
- Cut turf on highest setting and leave lawn clippings instead of collecting.
- Provide adequate and balanced levels of nutrients to the turf. Avoid excessive amounts of nitrogen, and apply nutrients based upon turf species and cultivar nutrient requirements, level of use and soil type.
- Use soil cultivation techniques such as spiking, slicing and core aerification to improve water infiltration and minimize runoff during irrigation or rainfall events.
- Use environmentally safe wetting agents to improve water infiltration.
- Explore the potential use of polymers as a means of increasing water retention and reducing water loss to evaporation.
- Limit cart traffic to paths to minimize turf wear and soil compaction.
- Prune roots of trees near critical turf areas to prevent tree root competition with the turf for moisture and nutrients.
- Utilize supplemental water sources where possible (e.g. purchased water, collected rainwater, etc.).
- Utilize water reuse where possible.

Landscape Management and Irrigation

- Avoid watering on windy days.
- Use drip irrigation in landscape areas to apply water only to the plants that need it.
- Use mulches in shrub and flowerbeds to reduce water evaporation losses.
- Consider use of polymers as a means of increasing water retention and reducing water loss to evaporation.
- Use xeriscape landscaping or native drought tolerant plants where feasible around buildings, parking areas or other appropriate places.
- Plant native vegetation when replacing vegetation.
- Utilize supplemental water sources where possible (e.g. purchased water, collected rainwater, etc.).
- Utilize water reuse where possible.

Power Washing or Vehicle Washing

- Vehicle and field equipment washing shall prohibited, unless the water used is recycled and re-circulated

- No washing of driveways, sidewalks, or streets.

Bathrooms/Other Indoor Facilities (if applicable)

- Check for toilet and faucet leaks and repair any found leaks immediately.
- Use water displacement device in toilet tank or replace older model toilets with HET models when possible.
- Install aerators on faucets.
- Turn off master water shutoff when facilities are not in use.
- Do not over water potted plants.

Permittee Actions:

- Post signs using District terminology at all faucets, sinks, outdoor spigots, and other water sources to remind visitors, customers, facility personnel, grounds maintenance crews and employees of the current drought stage curtailments (not an applicable requirement for residential irrigation).
- Inform employees or grounds maintenance crews of need to reduce water use.
- Monitor for occurrences of waste.
- Visually inspect lines and repair leaks on a regular basis.
- Monitor any construction activity and require contractors to report line breaks immediately or shutoff flow if possible.
- Evaluate system pressure needs and reduce pressure where excessively high.

The following uses of water are defined as nonessential and should be limited:

- wash down of any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas
- use of water to wash down buildings or structures for purposes other than immediate fire protection
- use of water for dust control unless required for mandatory regulatory compliance
- flushing gutters or permitting water to run or accumulate in any gutter or street
- failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s) and
- any waste of water.

_____ E. Public Water Supply

(Initial Here)

The first section of this appendix addresses additional drought measures for all water utilities, and it concludes with two sections of drought provisions specific to Retail PWS providers and to Wholesale PWS providers, respectively.

1. Additional Recommended Drought Measures for All PWS Providers

Utility System Management

- Conduct a monthly Leak Detection Survey and immediately repair all identified leaks in the system.
- All meters shall be read as often as necessary to ensure compliance with this program for the benefit of all its customers.
- Limit line flushing to the hours of 9pm to 3am and only flush dead end main.
- Implement the provisions of the utility's Water Conservation Plan or Drought Contingency Plan that are on file with the TCEQ or TWDB.
- Emergency interconnects, pumpage authorized by a Temporary Transfer Permit, or alternative supply arrangements shall be initiated to meet the respective reduction requirement.

Public Awareness

- Promote the water conservation BMPs listed in the Permittee's UCP and the next section of this appendix through website and print materials.
- Implement public awareness efforts such as placing yard signs and/or posters in visible places within the service area to remind users of the prospective drought stage.
- Include historic water use and customer water use comparisons in customer billings.
- Include on each water bill a conspicuous reminder of the prospective drought stage.
- Utility should identify highest 5% water users in the residential, commercial, and industrial customer sectors so that focused efforts can be initiated by the utility to provide awareness information and irrigation auditing services (if the utility has the ability to provide irrigation audits).
- If your utility follows the District's drought stages then utilize the correct terminology on all outreach signage, e.g., "Stage D-3 Extreme Drought".

Utility Initiated Penalties or Consequences

- Utility employees and system operators shall regularly monitor the service area for occurrences of waste.
- Utility should issue Warnings for 1st occurrence of waste to residential customers who demonstrate waste, UDCP violations, excessive monthly consumption or proscribed use (greater than 20,000 gallons/month).
- Utility should install flow restrictors on connections with continued waste, UDCP violations, and excessive monthly consumption, or proscribed use.
- Utility should assess surcharges and fines for continued waste, UDCP violations, excessive monthly consumption or proscribed use.

Municipal Practices

- Follow recommended irrigation BMPs for municipal parks and recreation areas.
- Train employees and personnel on implementing recommended indoor water conservation BMPS.

2. Drought Stage Measures for Retail Public Water Supply Utility's End Users

The Retail PWS Permittee will encourage or will establish regulatory or ordinance requirements (as/if possible) of end users to adopt the following water efficiency measures during District declared drought stages:

Indoor Measures

- Visually inspect lines and repair leaks on a regular basis.
- Check for toilet and faucet leaks and repair any found leaks immediately.
- Use water displacement device in toilet tank or replace older model toilets with HET models when possible.
- Install aerators on faucets and water efficient appliances.
- While waiting for hot water to reach faucet, catch cold water in a container to be reused.
- Only run dishwasher with full load.
- Keep drinking water in a container in the refrigerator.
- Reduce use of garbage disposal.
- Wash only full loads of laundry.
- Turn off master water shutoff when out of town or on vacation.
- Draw less water for bath or reduce shower time.
- Do not over water houseplants.

Outdoor Measures – Landscape Irrigation

- Adopt a 2-day/week or every 5th day schedule for lawn watering and always only water between 8pm and 8am.
- For Automatic Sprinkler systems:
  - check sprinkler heads regularly to prevent clogging
  - adjust to eliminate overspray and
  - adjust run times and frequency monthly to respond to water schedules and changing rainfall and temperature conditions.
- Use hand-held hose, drip irrigation, or soaker hoses for trees, garden, non-turf areas and bedded plants.
- Avoid watering on windy days.
- Cut lawns on highest setting and leave lawn clippings on lawn instead of bagging.
- For hose-end sprinklers - use sprinkler timers to limit water duration.
- Use mulch to conserve soil moisture.
- Irrigation of lawn areas with hose-end sprinklers or automatic irrigation systems shall be manually set to follow a 2 day/week or every-5th day watering schedule between the hours of 8pm and 8am.
- Use hand-held hose, drip irrigation, or soaker hoses for trees, garden, non-turf areas and bedded plants during designated water days and times.
- Use of soaker hoses for foundation protection shall be limited to designated water days and times

Outdoor Measures – Vehicle Washing

- Vehicle washing should be avoided except when conducted with a bucket or hand-held hose with an automatic shutoff device during designated watering days and times (if possible, use a commercial car wash that recycles water).
- Wash vehicles over lawn areas where possible.

Outdoor Measures – Pools and Fountains

- Keep pools covered when not in use.
- Limit pool filter backwashing to only when necessary.
- Utilize supplemental water sources where possible (e.g. purchased water, collected rainwater, etc.).
- Filling or refilling of pools is strongly discouraged. Topping off of existing pools for essential maintenance purposes is acceptable only during designated watering days and times.

- Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.

The following uses of water are defined as nonessential and should be avoided by end users during drought:

- wash down of any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
- use of water to wash down buildings or structures for purposes other than immediate fire protection;
- use of water for dust control;
- flushing gutters or permitting water to run or accumulate in any gutter or street;
- failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s); and any waste of water.

3. Required Additional Drought Stage Measures for Wholesale Public Water Supply Utilities

- Permittee will periodically provide wholesale water customers and the public with information about this Plan, including information about the conditions under which each stage of the Plan is to be initiated or terminated and the drought response measures to be implemented in each stage. This information will be provided by means such as public meetings, via billing invoices, websites, public notice, news media announcement, or electronic mail etc.
- Permittee will notify customers of the initiation or termination of drought responses stages by certified mail.
- Permittee will offer an opportunity for the public to provide input in the initial preparation and future revisions of the Plan, to be provided by the Permittee via means such as a public meetings, via billing invoices, websites, public notice, news media announcement, or electronic mail etc.; documentation of these efforts will be provided to the District for record.
- The Permittee will initiate weekly contact with wholesale water customers to discuss water supply and/or demand conditions and will request that wholesale water customers initiate mandatory measures to reduce water use.
- Permittee will provide updates on website with information regarding current water supply and/or demand conditions, projected water supply and demand conditions if drought continues to persist.
- Permittee must develop and implement procedures for enforcing this UDCP, specifically including a provision in every wholesale water contract entered into or renewed after adoption of the plan, including contract extensions, that in the event of a pumpage curtailment resulting from drought, the groundwater to be supplied by the Permittee under contract will be curtailed in accordance with the applicable drought stage triggers and response chart in this UDCP and that informs Permittee customers of its authority and intent to enforce the measures of the UDCP.
- If Permittee fails to meet District required drought curtailments, then the Permittee shall host a monthly meeting with all wholesale customers to discuss supply/demand conditions and possible solutions for meeting curtailments. Meetings shall be held for the duration of the Stage III, Stage IV, Stage V Drought.
- If Permittee fails to meet District required drought curtailments, then Permittee shall report a monthly accounting of water delivered to each wholesale customer. This information shall be used by the Permittee to identify an enforcement process for requiring wholesale customers to reduce demand. Monthly delivery reports shall be submitted for the duration of the Stage D-2, Stage D-3, and Stage D-4 Droughts.

7 – Hydrogeological Report

REPORT OF FINDINGS
WRGS 25-014

Hydrogeologic Report for OP III ATX Ledgestone I, LP.

Citizen House Ledgestone Well No. 1

for

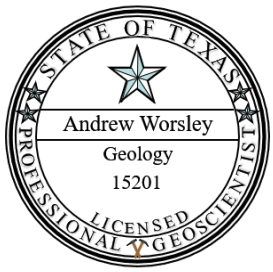
OP III ATX Ledgestone I, LP
500 West 5th Street
Austin, Texas 78701

Travis County, Texas
June 2025

WRGS Project No. 256-002-24

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TBPG Firm Registration No. 50038

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Section I: Executive Summary

This report details the results of a hydrogeologic study to meet the guidelines mandated by the Southwestern Travis County Groundwater Conservation District (SWTCGCD) for a regular production permit application. OP III ATX Ledgestone I, LP is submitting a non-agricultural operating permit application to produce up to 2,980,000 gallons per year from a newly constructed Lower Trinity Aquifer well located in southwestern Travis County.

Citizen House Ledgestone (CHL) Well No. 1 is located within property acquired by OP III ATX Ledgestone I, LP and will be discharged into an onsite irrigation system. The anticipated pumping rate for the well is 35 gallons per minute. The pumping schedule for water to be produced from the well will be dependent upon irrigation demand and local precipitation; the majority of use will likely occur in the summer months.

An aquifer test work plan was designed and approved by SWTCGCD staff prior to starting the field work. To meet the guidelines for the SWTCGCD Tier 2 report and to adequately assess the properties of the Lower Trinity Aquifer, an aquifer test was conducted by utilizing the newly completed CHL Well No. 1 and two (2) nearby newly completed Lower Trinity Aquifer wells. The aquifer test consisted of pumping the well for at least 22 hours followed by a recovery phase while continuously measuring water levels in the pumping and observation wells. A total of 41,362.1 gallons were pumped during the aquifer testing. SWTCGCD recommended a total volume for the test of 40,822 gallons due to the current drought conditions. The pumped volume represents approximately 5 times the daily equivalent volume of the requested permit. During the pumping phase of the test, CHL Well No. 1 was pumped at an average rate of 31.2 gpm; the initial rate was 38 gpm and the final measured pumping rate was 31 gpm with 131.25 feet of drawdown, resulting in a specific capacity of 0.24 gpm/ft. The average calculated transmissivity for CHL Well No. 1 was 74.85 $ft.^2$/day from the Cooper and Jacob and Theis methods. Drawdown was observed in the two observation wells; therefore, the average calculated storativity value using both the Theis and Cooper and Jacob methods was 9.14×10^{-5}. The aquifer test data indicate that there were no major effects from nearby pumping of surrounding wells and no significant recharge or discharge boundaries experienced.

Water quality was analyzed during the testing. In general, the water quality results indicate the water produced during the aquifer testing meets TCEQ MCLs and SCLs, with the exception of elevated total dissolved solids and sulfate concentration in CHL Well No. 1. Field parameter data were collected during the aquifer test, including pH and specific conductance taken at various times during the pumping phase of the aquifer test. The results indicate that the pH and specific conductance slightly changed throughout the pumping phase. The reason for the slight increase in pH is unknown; however, the increase could be attributed to chemical residues leftover from the drilling process (i.e. drilling mud and/or sodium based solutions). No negative impacts to water quality are anticipated with prolonged production from CHL Well No. 1.

As required by the SWTCGCD, the effects of current and projected pumpage on water levels on surrounding wells for a one week, one year, and seven year period were estimated using the Theis equation. Based on the results of the modeling, CHL Well No. 1 continuously pumping at a rate of 5.67 gpm for 1 week, 1 year, and 7 years results in an estimated 22.21 feet, 26.80 feet, and 29.06 feet, respectively. Based upon the results of the aquifer testing and subsequent modeling, drawdown will likely be experienced in neighboring wells completed within the Lower Trinity Aquifer within a 4-mile radius; however, that

drawdown is not expected to have any unreasonable impacts on the aquifer or surrounding wells, springs, or surface water due to the static water level and relatively low pumping volumes.

Section II: Introduction

This report details the results of a hydrogeologic study to meet the guidelines mandated by the Southwestern Travis County Groundwater Conservation District (SWTCGCD) for a non-agricultural operating permit application. OP III ATX Ledgestone I, LP (the Owner) is submitting a production permit application to produce up to 2,980,000 gallons per year from the newly constructed Citizen House Ledgestone Well No. 1 (CHLWell No. 1) located south of U.S. Highway 290 in southwestern Travis County (Figure 1). The proposed Lower Trinity Aquifer well will add needed well capacity to meet irrigation demands. There are currently no existing wells on the property.

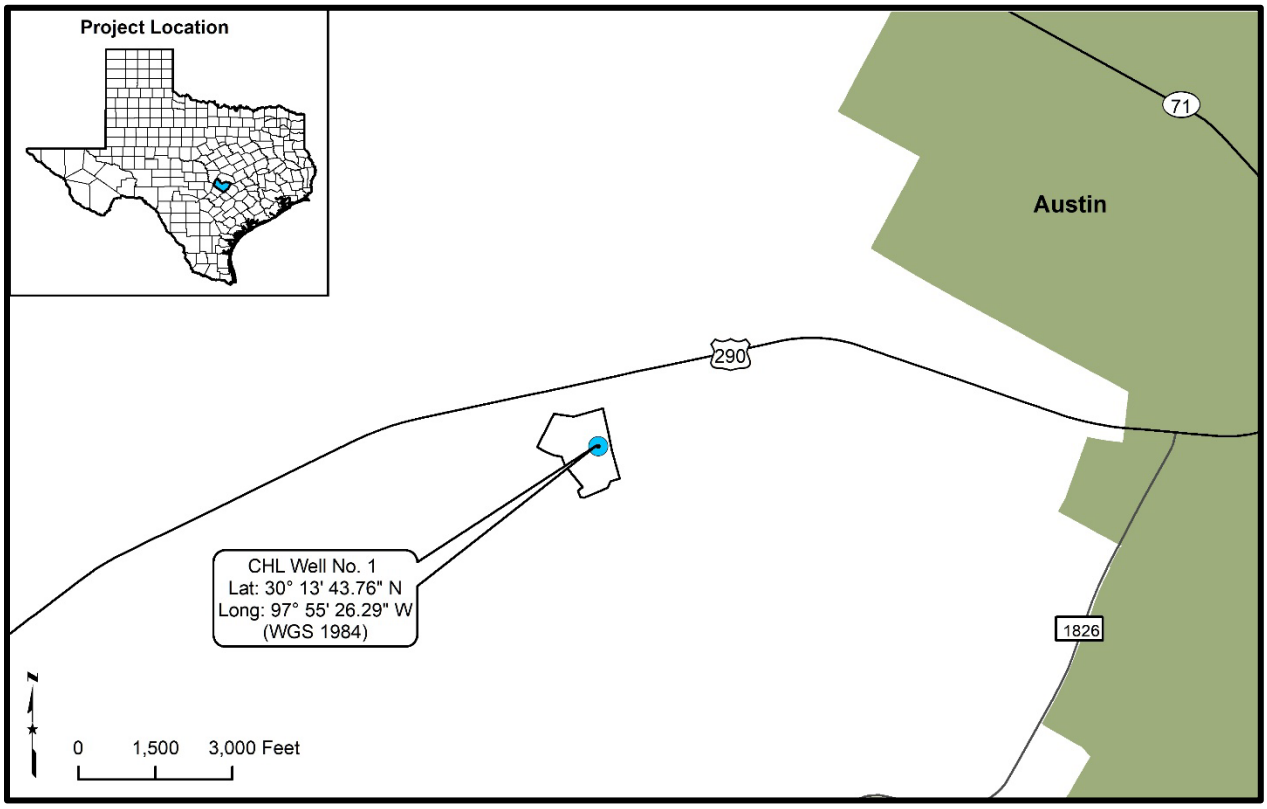


Figure 1: Location map of CHLWell No. 1

Acquisition of a non-agricultural operating permit from the SWTCGCD requires acceptable aquifer testing and a hydrogeologic report (Tier 2 - anticipated production volume greater than or equal to 1,000,000 gallons up to 10,000,000 gallons per year) for the operating permit. Aquifer testing and report parameter guidelines laid out in the SWTCGCD "Guidelines for Hydrogeologic Reports and Aquifer Testing – Southwestern Travis County Groundwater Conservation District Travis County" (November 2020) were used to structure this hydrogeologic report pursuant to the SWTCGCD mandate.

According to the SWTCGCD, the purpose of the Tier 2 test and report is to make an assessment of the short and long-term potential for unreasonable impacts to the regional aquifer system and existing surrounding water wells from the proposed pumping.

The objectives of this Tier 2 report are to support the Owner's application for a regular production permit authorizing production from the Lower Trinity Aquifer, by demonstrating the following:

1. Provide a detailed description of the project to include location, pumping demands, pumping schedules (frequency, peak demand hours, and pumping rates), and the location and volume of the water;

2. Design, perform, and analyze the results of the aquifer test at CHL Well No. 1 in order to estimate the site-specific aquifer properties;

3. Discuss the estimated extent and magnitude of well interference; and,

4. Report water quality sample results, evaluate future water level impacts, and assess potential water quality impacts from CHLWell No. 1.

Section III: Description of the Well Site and Water System

III.1. Introduction

CHL Well No. 1 is located within a 77.749-acre property owned by OP III ATX Ledgestone I, LP and will be used for irrigation. The Owner is subdividing the property into three (3) smaller tracts; CHL Well No. 1 is within a 36.175-acre tract (Figure 2). The well is situated at least 150 feet from nearby property boundaries and proposed wastewater lines. Figure 2 provides a site map of the well location in relation to the property boundaries; a more detailed site plan map is included in Appendix A. Water from the proposed well will not be leased, resold, transferred or transported to other users than the owner for irrigation purposes within their property.

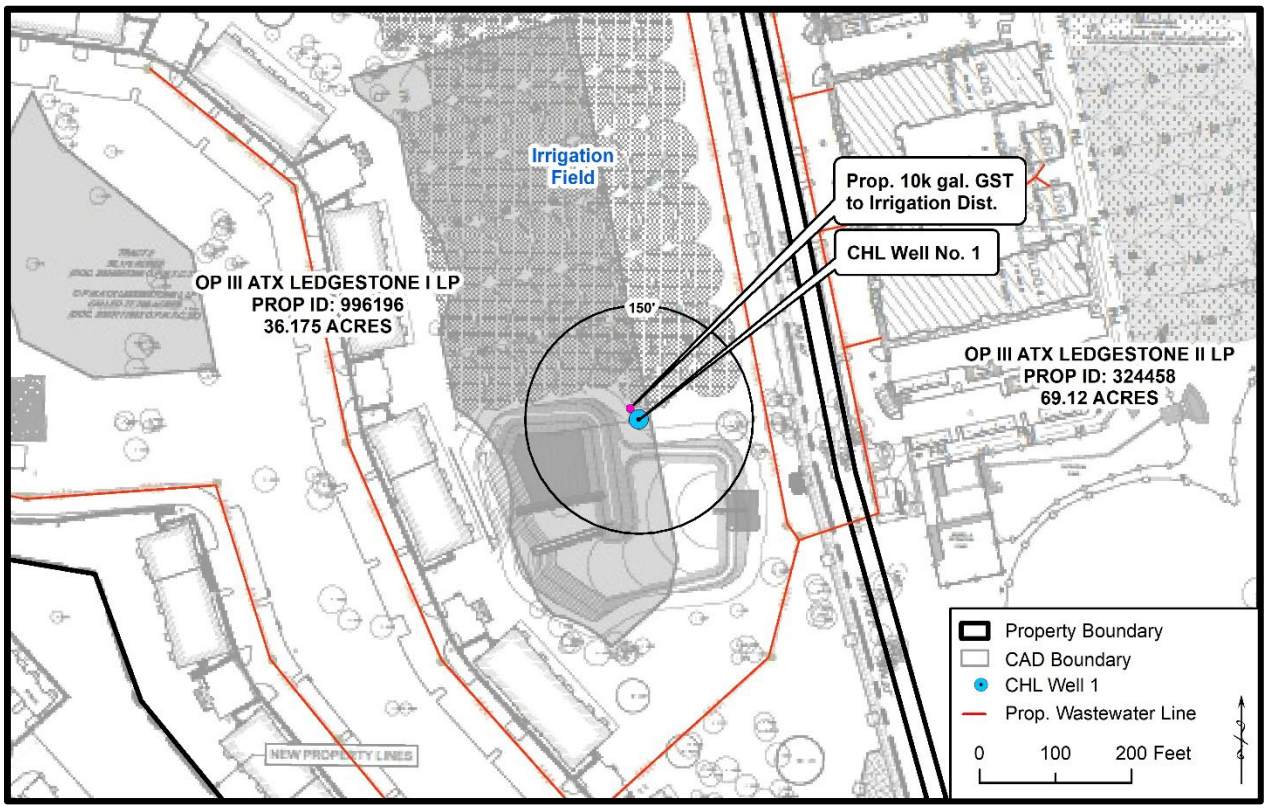


Figure 2: OP III ATX Ledgestone I, LP site map

III.2. Well Site and System Details

According to the irrigation calculations provided by both the Owner's landscape architects and the SWTCGCD, the total irrigated area consists of approximately 158,400 square feet of warm-season turfgrass and 43,600 square feet of mixed landscape beds. In order to irrigate the area, a permit volume of 2,980,000 gallons per year was recommended by SWTCGCD and requested by the Owner. Table 1 provides an estimated monthly breakdown of the anticipated pumping volume based upon the information provided by the Owner's landscape architect.

Table 1: Monthly water demand estimates

Month	Water Demand (gallons)
January	117,715
February	141,046
March	224,826
April	272,548
May	330,875
June	370,114
July	374,356
August	376,477
September	288,456
October	226,947
November	142,107
December	114,534
Total	**2,980,000**

The pumping schedule for water to be produced from the well will be dependent upon irrigation demand and precipitation events. Peak pumping demand hours are projected for either the early morning or late evening hours to accommodate typical irrigation schedules and to mitigate evaporative loss; peak pumping demand will also be subject to seasonal change, such as increased usage in the summer and decreased usage in the winter (Table 1).

In order to meet daily demand, CHL Well No. 1 has been outfitted with a submersible pump capable of producing up to 35 gallons per minute (gpm), depending on aquifer conditions and the total dynamic head on the pump. A pump installation certification has been provided to SWTCGCD. The proposed system configuration entails pumping water from CHL Well No. 1 into an adjacent 10,000 gallon ground storage tank. Water from the tank will then be sent into the irrigation system via booster pumps or from a pressure tank. Anticipated operations of irrigation would occur multiple times per week with cycles lasting up to 12 hours, depending on water demand.

Section IV: Hydrogeology and Conceptual Model

IV.1. Introduction

The two major aquifers located within Travis County are the Edwards Aquifer and the Trinity Aquifer. These two aquifers make up a thick and regionally extensive aquifer system composed of Lower Cretaceous carbonates that were deposited throughout central Texas. The aquifers are affected by geologic structures which include the Llano Uplift, the San Marcos Arch, and the Balcones fault system (Ashworth, 1983). The lower of the two aquifers, the Trinity Aquifer is composed of three distinct hydrogeologic units: the Upper, Middle, and Lower Trinity Aquifers.

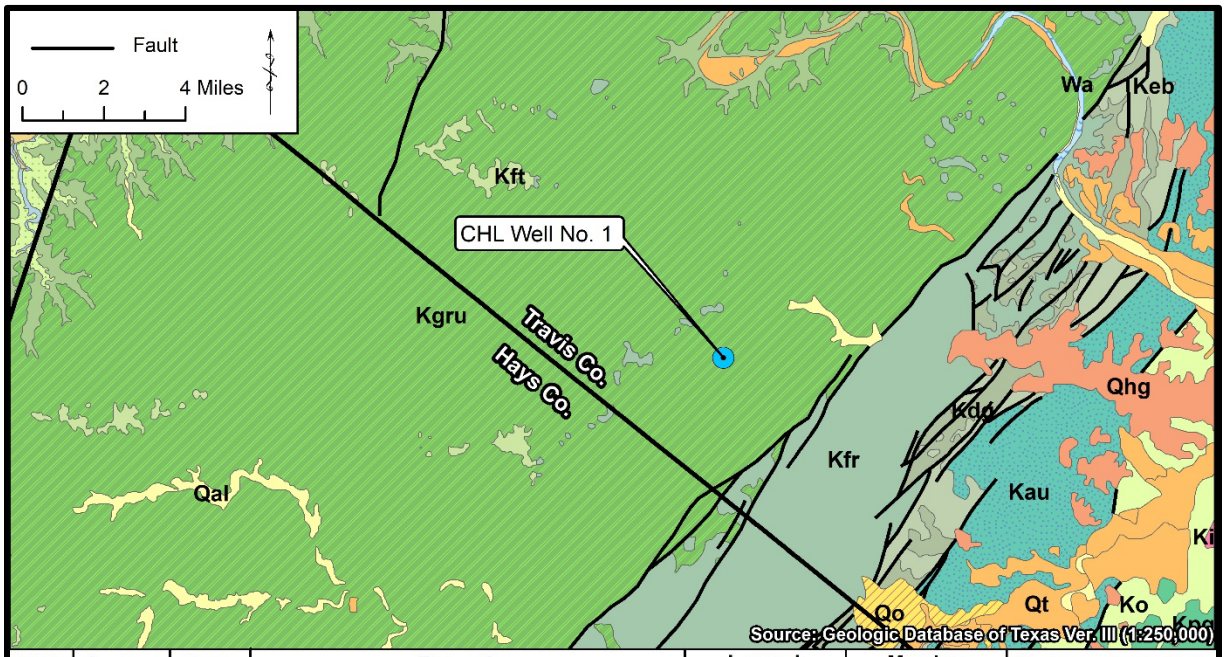
On the Edwards Plateau in western Travis County, the regional dip of the Cretaceous rocks is generally about 70 feet per mile to the southeast, which is the approximate gulfward slope of the land surface. Southeast of the Balcones Fault Zone (BFZ) the dip is progressively greater toward the Gulf, approaching 100 feet per mile in southeastern Travis County (DeCook, 1963).

IV.2. Stratigraphy and Geologic History

The project site overlies the Cretaceous aged sedimentary rocks comprising the Trinity Aquifer. The Upper Glen Rose Limestone crops out at the surface. The sediments were deposited approximately 140 million years ago by a Cretaceous aged sea that once dominated the interior of North America and the Gulf Coast region (Toll et. al, 2018). For approximately 79 million years this shallow sea deposited the sediments that now make up the property and its surrounding area. Figure 3 provides a geologic map and stratigraphic column illustrating the geology surrounding the project location.

The Trinity Aquifer is divided into three distinct aquifers from oldest to youngest: the Lower, Middle, and Upper Trinity aquifers. Formations comprising the Lower Trinity Aquifer include, from oldest to youngest, the Hosston Sand Member and Sligo Limestone Member of the Travis Peak Formation (Figure 3). The Hosston consists of a conglomerate of gravel, sand and clay cemented by both calcite and quartz. The Hosston also contains sections of sandstone, siltstone, claystone, dolomite, limestone and shale. The Sligo Limestone consists of clastic sediment, and becomes dominantly limestone and dolomite to the east. Surface outcrops are referred to in the literature as Sycamore; Hosston and Sligo are the subsurface equivalents. The Lower Trinity Aquifer units uncomformably overlay the Paleozoic basement (Hunt et al., 2010).

Located stratigraphically above the Hosston Sand is the Hammett Shale (Hammett Clay) Member. The Hammett Clay is a transgressive shale deposit that onlaps Lower Trinity Sligo and Hosston formations. The interval averages 60 feet in thickness in the Travis County area (Brune and Duffin, 1983). The unit is primarily a clay rich, gray-green sticky, dolomitic shale/claystone with siltstone and dolomite lenses. Color can be dark gray to black, blue, greenish gray and gray. The Hammett Clay is a confining bed separating the Lower Trinity Aquifer from the Middle Trinity Aquifer (Figure 3).



ERA	System	Group	Formation	Legend	Member	Hydrogeologic Unit
Cenozoic	Quaternary to Neogene		Pliocene to Recent floodplain (alluvium and fluviatile terrace deposits)	Qal; Qhg; Qt; Qhg, Qle, Qo		localized alluvial aquifers
Mesozoic	Upper Cretaceous	Navarro/ Taylor	Marlbrook Marl	Kknm		confining beds
			Pecan Gap Chalk	Kpg		
			Ozan (Lower Taylor Marl)	Ko		
		Austin	Austin Chalk Lmst.	Kau		localized fractured limestone aquifer
		Eagle Ford	Eagle Ford Shale	Kef, Keb		confining beds
		Washita	Buda Lmst.	Kbu, Keb		
			Del Rio Clay	Kdr, Kdg		
	Lower Cretaceous		Georgetown Lmst.	Kgt, Kdg		Edwards Aquifer
		Fredericksburg	Edwards	Kfr	Marine; Leached/Collapsed; Regional Dense; Grainstone; Kirschburg evap.; Dolomite Mbr.; Burrowed Mbr.; Basal Nodular Bed	
		Trinity	Glen Rose Lmst.	Kgru	Upper Mbr.	Upper Trinity Aquifer
				Kgrl	Lower Mbr.	Middle Trinity Aquifer: Aquifer
			Travis Peak	Kh, Kch	Hensell Sand / Bexar Shale	Middle Trinity Aquifer: Aquitard
				Kcc, Kch	Cow Creek Lmst.	Middle Trinity Aquifer: Aquifer
				Kha	Hammett Shale	confining bed
				Ksy	Sligo Lmst. / Hosston Sand	Lower Trinity Aquifer

Figure 3: Geologic map with stratigraphic column (modified from Ashworth, 1983; Maclay and Small, 1986)

Above the Hammett Clay lies the Middle Trinity Aquifer composed of the Cow Creek Limestone and the Hensell Sand members of the Travis Peak Formation and the Lower Glen Rose Limestone Member of the Glen Rose Formation (Figure 3). The Cow Creek Limestone is a massive, fossiliferous limestone and dolomite ranging up to 100 feet in thickness and may contain some interbedded sand, clay, and evaporite minerals such as gypsum and anhydrite (Ashworth, 1983; Brune and Duffin, 1983; Preston et. al, 1996). The formation was subaerially exposed and subjected to meteoric water infiltration during early Hensel time, which resulted in widespread vuggy porosity (Loucks, 1977). In some areas, the Cow Creek is heavily fractured and capable of producing large well yields.

Overlying the Cow Creek Member is the Hensell Sand Member (Figure 3), which in the outcrop, is composed of loose sand and grades into thick continental deposits of red clay, silt, sand, and conglomerate with limestone beds in the subsurface. Downdip, the Hensell grades into marine deposits of silty dolomite, marl, calcareous shale, and shaley limestone known as the Bexar Shale Member (Ashworth, 1983). Downdip, the Bexar Shale acts as a confining unit for the Cow Creek Member (Wierman et al., 2010).

Stratigraphically above the Hensell Sand/Bexar Shale, the Glen Rose Limestone Formation is divided into an Upper and Lower Member (Figure 3). The Glen Rose Limestone, along with the Hensell Sand represents a wedge of sediments deposited in a transgressing sea. George (1952) separated the Glen Rose into upper and lower members. The boundary between the two members is identified by a thin, heavily fossiliferous limestone bed containing *Corbula martinae* that persists throughout the study area except where erosion has lowered the land surface below the bed (Whitney, 1952; Ashworth, 1983). The separation between the two units is also distinguishable on geophysical logs where two distinct evaporite zones are found within the Upper Glen Rose; one midway through the Upper Glen Rose and another near the base shown by resistivity spikes on a geophysical log. The lower member of the Glen Rose Limestone consists of a massive, fossiliferous limestone at the base grading upward into thin beds of limestone, dolomite, marl, and shale. The top 15 to 20 feet of the lower member, designated the *Salenia texana* zone, is a highly fossiliferous, nodular marl and limestone which is capped by the Corbula bed (Ashworth, 1983). Near the top of the Lower Glen Rose, in some locations, is a reef deposit that is cavernous, heavily fractured, and can range in thickness. Where the reef deposit is encountered, the Lower Glen Rose Member can provide high yielding wells.

The Upper Member of the Glen Rose Formation, comprising the Upper Trinity Aquifer, consists of alternating beds of limestone and dolomite with marly sections that act as aquitards and restrict downward migration of groundwater to the Middle and Lower Trinity Aquifers (Wierman et al., 2010). The Upper Glen Rose also contains two distinct evaporite beds of gypsum or anhydrite that are easily distinguishable on geophysical logs due to high resistivity values. The lower evaporite zone occurs at the base of the Upper Glen Rose, which Ashworth (1983) describes as a "convenient correlation marker" between the Upper and Lower Glen Rose. The evaporite beds in some cases are the source of elevated sulfate concentrations in groundwater. The Upper Trinity Aquifer can yield small to moderate amounts of water to shallow wells which are often utilized for livestock and domestic use.

The Edwards Aquifer is comprised of three geologic formations, from oldest to youngest: the Kainer and Person formations (Edwards Group), and the Georgetown Formation (Washita Group; Figure 3). These formations were formed during the Cretaceous period during which the San Marcos Platform

depositional environment varied from open marine to supratidal flats, where significant exposure and inundation of the sediments took place (Rose, 1972). At the base of the Edwards Group lies the Kainer Formation, which is comprised of the basal nodular bed, dolomitic, and grainstone members. The basal nodular member (Walnut Clay equivalent) is a marine deposit consisting of massive, nodular wackestones and has a low permeability. The dolomitic member consists mostly of intertidal and tidal, burrowed and dolomitized wackestones with significant permeability. The upper part of the dolomitic member contains leached evaporitic deposits of the Kirschberg evaporite. The uppermost member of the Kainer Formation is the grainstone member, which is a shallow marine deposit that marks the beginning of another cycle of sedimentation started by a transgressing sea. This member consists of well-cemented, miliolid grainstones with lesser quantities of mudstone (Maclay and Small, 1986). The upper stratigraphic unit of the Edwards Group is the Person Formation, which consists of the regional dense, collapsed, leached, and marine members (Rose, 1972). The basal member is a laterally extensive marine deposit consisting of dense, shaley mudstone known as the regional dense member. The overlying members, the collapsed member and leached member, consist of intertidal to supratidal deposits containing permeable units formed by collapse breccias and by dolomitized and burrowed wackestones. The uppermost member is the marine member, which consists of rudist-bearing wackestones and packstones and shell-fragment grainstones (Maclay and Small, 1986).

IV.3. Hydrogeology

The Trinity Aquifer in the Hill Country area spans as far north as Gillespie County and as far south as Bexar, Comal, and Hays County where fresh water can be produced. As the name suggests, the Trinity is composed of three aquifers: Upper, Middle and Lower Trinity Aquifers. Figure 4 shows the location of the Trinity Aquifer with respect to other major aquifers in the area, including the Edwards Aquifer. The solid green portion reflects the unconfined zone of the Trinity Aquifer where recharge occurs; the solid blue portion reflects the unconfined zone of the Edwards Aquifer where recharge occurs. The green diagonal hatched region reflects the confined zone of the Trinity Aquifer where the formations that make up the aquifer dip beneath the land surface, and the blue diagonal hatched region reflects the confined zone of the Edwards Aquifer (Figure 4).

The Lower Trinity Aquifer is under confined conditions in the area of the project location. Confined groundwater is isolated from the atmosphere at the point of discharge by impermeable geologic formations, and the confined aquifer is generally subject to pressures higher than atmospheric pressure (Driscoll, 1986).

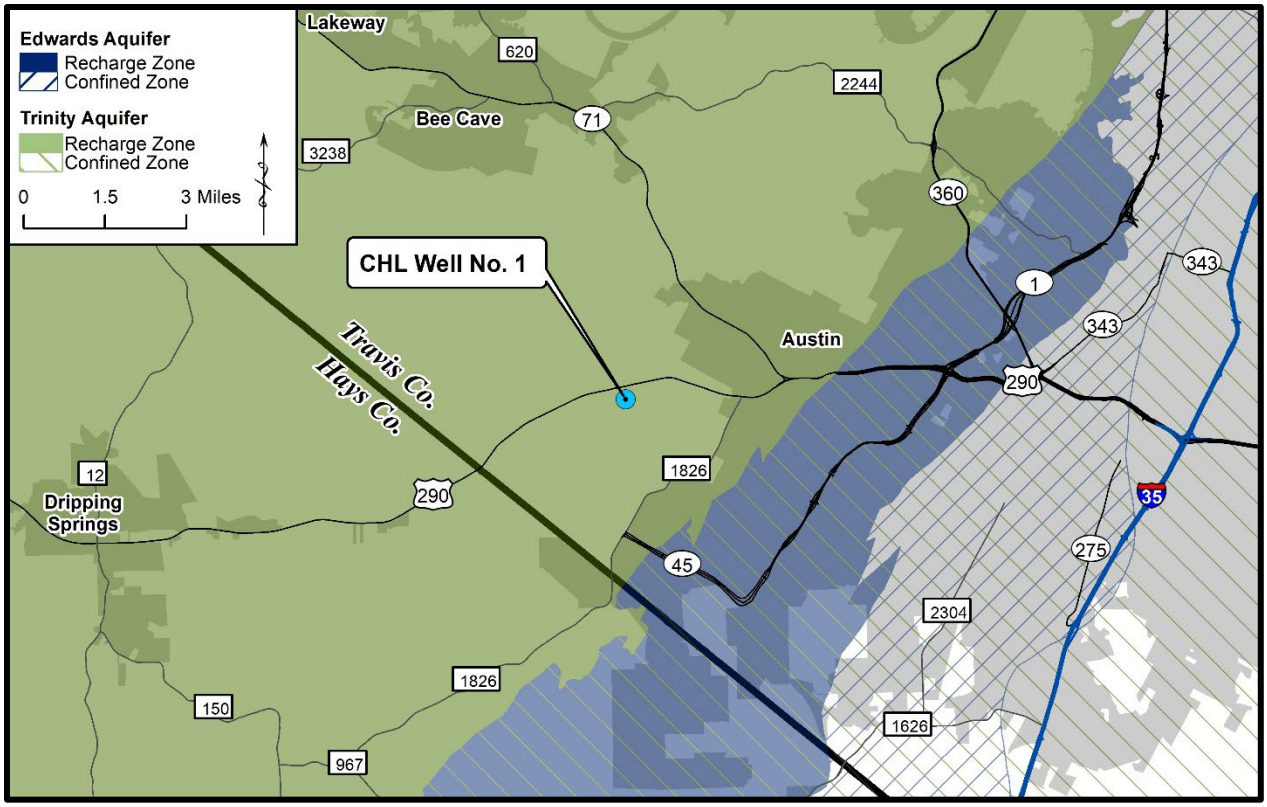


Figure 4: Aquifer map

IV.4. Conceptual Cross-Sections

CHL Well No. 1 sits atop a portion of the Upper Glen Rose Formation west of the Mount Bonnell Fault Zone. A suite of geophysical logs (gamma ray, spontaneous potential, 4-point resistivity, and caliper) were performed on CHL Well No. 1 and a few nearby wells to determine the formation thickness and fracture locations within the boreholes. Figure 5 shows a map of the wells used to create a cross-section of the study area; Figure 6 provides conceptual geologic cross-section from the interpreted geophysical logs. Appendix C provides copies of the geophysical logs utilized for the cross-section.

According to the available geophysical logs near the study area, portions of the Edwards Group crop out in areas of higher elevation; however, the outcrops are variable, and the unit thickens with dip to the southeast of the study area. The Upper Trinity Aquifer (Upper Glen Rose Member) thickness ranges from approximately 300 feet to 350 feet; the Middle Trinity Aquifer (Lower Glen Rose, Hensell, and Cow Creek members) averages approximately 300 to 320 feet across the study area; the Hammett Shale averages approximately 40 feet in thickness; the Sligo averages approximately 60 to 70 feet in thickness; and the Hosston averages approximately 220 or more (Figure 5 and 6). The base of the Lower Trinity Aquifer was not encountered in any of the geophysical logs utilized in the cross-section.

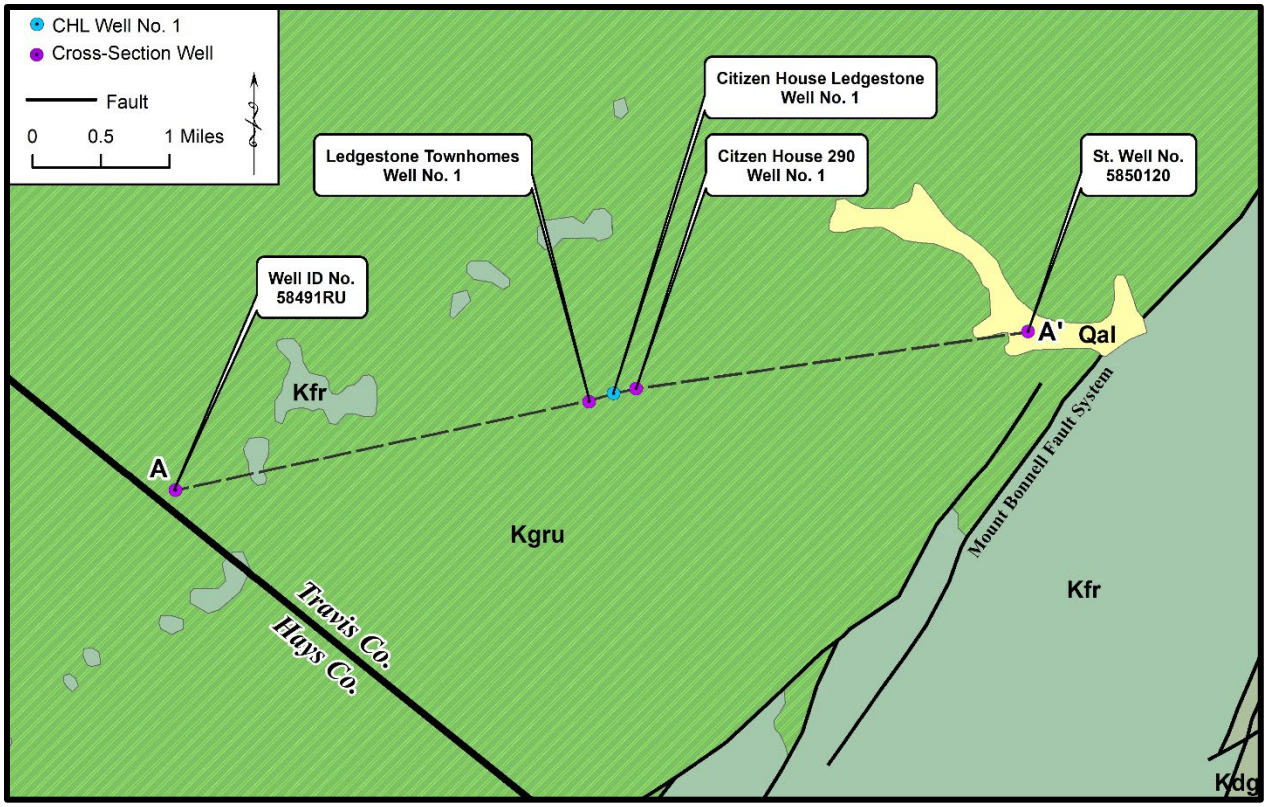


Figure 5: Geologic map with CHL Well No. 1 and SWTCGCD wells with cross-sections A-A'

In the area near CHL Well No. 1, the Mount Bonnell Fault Zone bisects the study area to the east of State Well No. 5850120. From other studies, the fault strikes from northeast to southwest, but does not bisect the cross section (Figures 5 and 6).

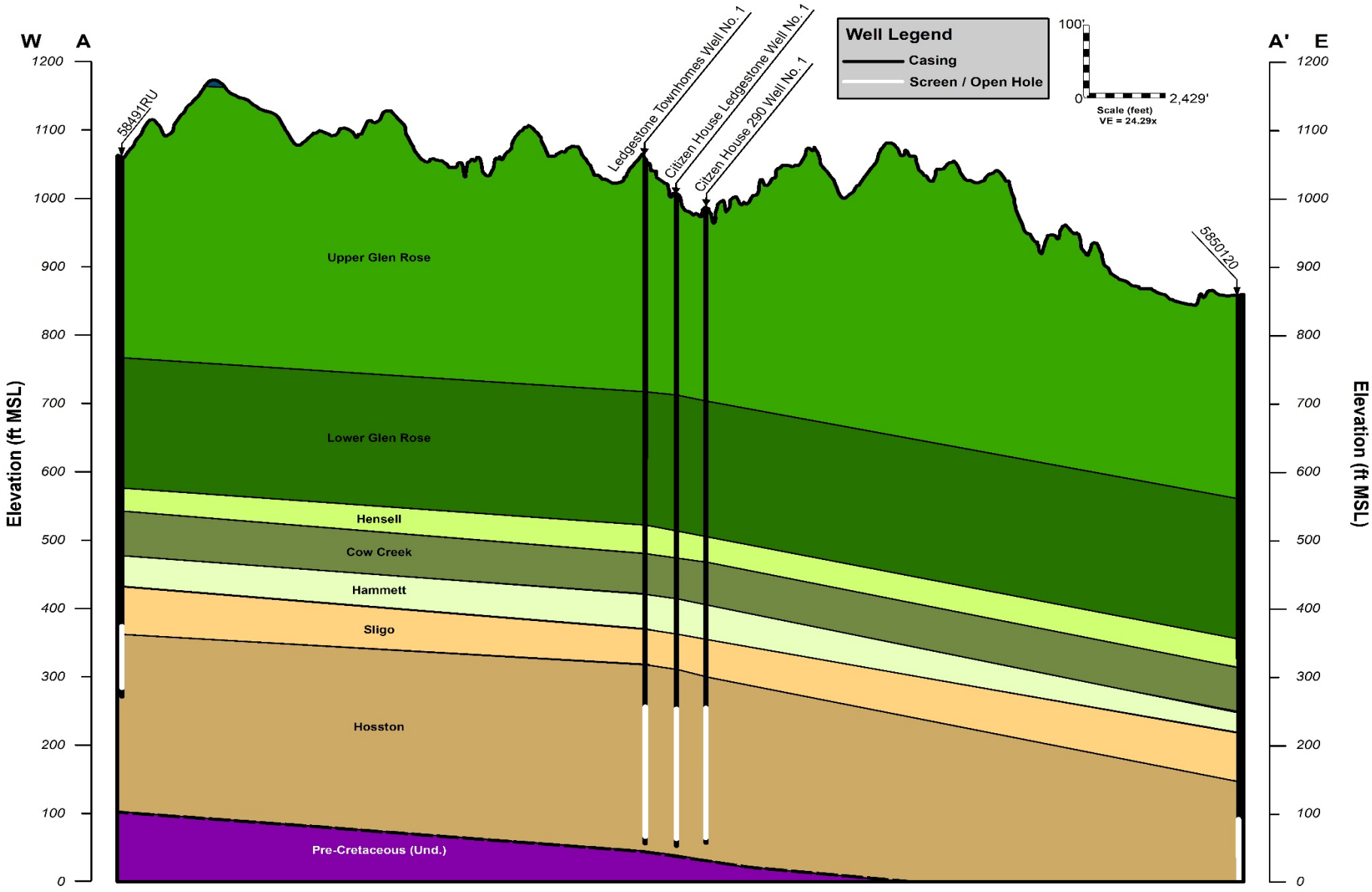


Figure 6: Conceptual hydrogeologic cross section of the study area

IV.5. Discharge Features

In the vicinity of the project location, the majority of wells are completed within the Upper, Middle, and Lower Trinity aquifers. Figure 7 provides a map of documented wells, surface water bodies, springs, karst features, and potential recharge features in the area surrounding CHL Well No. 1. According to available data, there are no nearby springs or potential recharge features impacting the well; the Sligo and Hosston Formations comprising the Lower Trinity Aquifer crop out at the surface approximately 15 miles northwest of the study area. Surface water bodies include unnamed creeks and tributaries flowing to Slaughter Creek surrounding the project site. The surface water bodies have no direct influence on the proposed well. Major karst features such as fractures, faults, and sinkholes are not prevalent within the project site and surrounding area and none were noted during multiple site visits; fault trends and surface geology are provided in Figure 3.

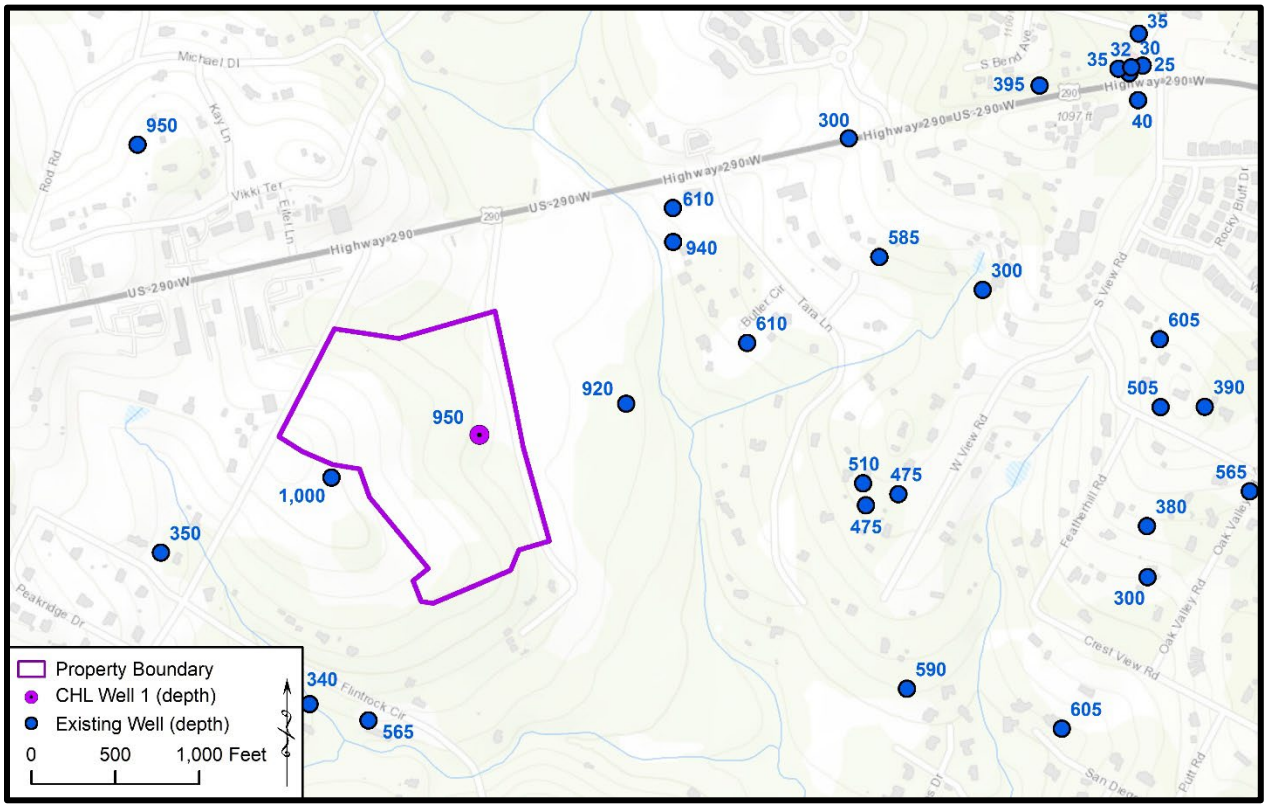


Figure 7: Map of area wells and surface water bodies near the project location

Section V: Well Construction and Aquifer Testing

To meet the guidelines for the SWTCGCD Tier 2 report and to adequately assess the properties of the Lower Trinity Aquifer, an aquifer test was conducted by utilizing the newly completed CHL Well No. 1 and two (2) nearby newly completed Lower Trinity Aquifer wells. The aquifer test consisted of pumping the well followed by a recovery phase while continuously measuring water levels in the pumping and observation wells. This was in accordance with SWTCGCD Tier 2 guidelines for a permit greater than or equal to 1,000,000 gallons and less than 10,000,000 gallons. An aquifer testing plan was submitted to and approved by the SWTCGCD. Based on the state well reports, drill cuttings, and geophysical logs, all wells used in the aquifer testing are completed in the Lower Trinity Aquifer. Figure 8 provides the locations of the observation wells relative to CH 290 Well No. 1. Table 2 provides a well construction summary for wells used in the testing; Well IDs in Table 2 correspond to Figure 8. Figures 9 through 11 provide the well profile schematics of the wells used in the aquifer testing. Appendix B provides the available state well reports; Appendix C provides the available geophysical logs.

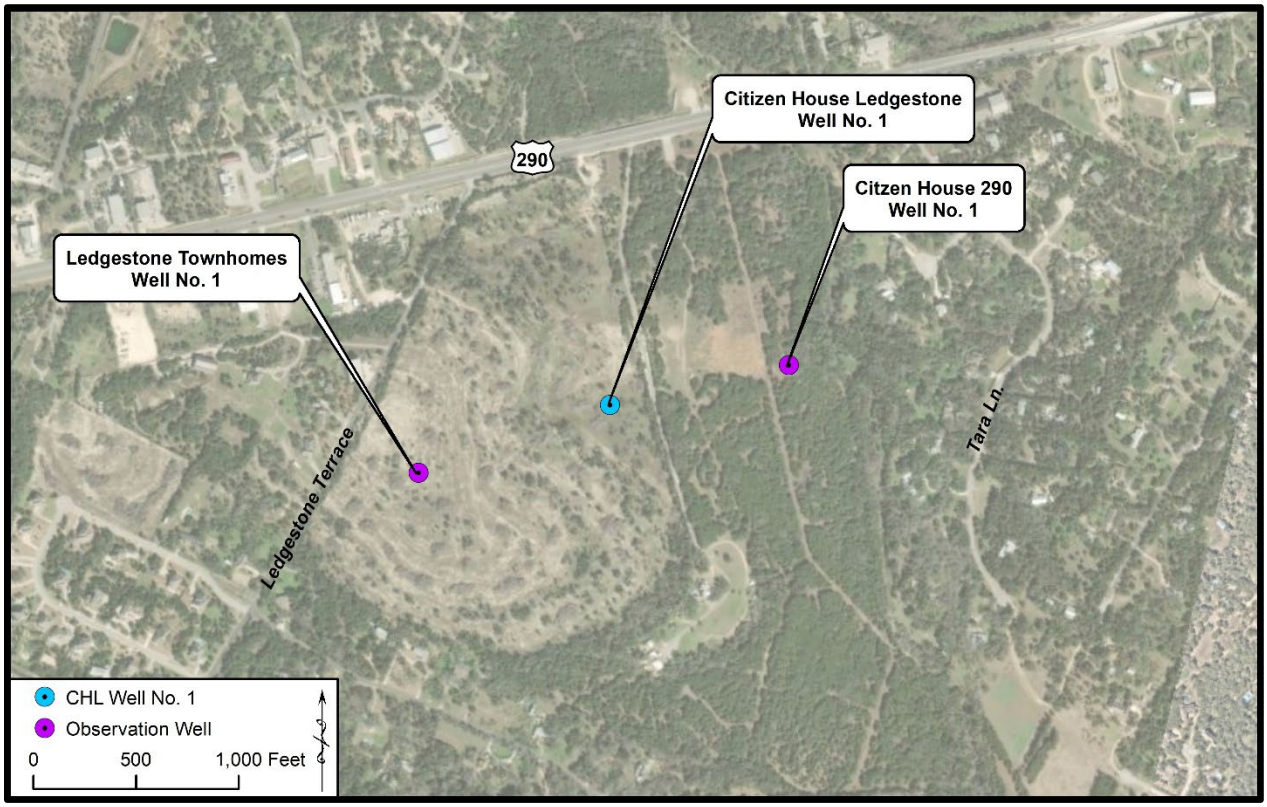


Figure 8: Location of CHL Well No. 1 and observation wells

V.1. Wells

The following provides a summary of the well construction for the wells used in testing:

Citizen House Ledgestone (CHL) Well No. 1

According to the State Well Report (Tracking No. 696105), Citizen House Ledgestone Well No. 1 was completed by Bee Cave Drilling on April 15, 2025 (Appendix B). The well was drilled to a depth of

950 feet below ground level (ft. bgl) with a 10 5/8-inch borehole from 0 to 10 ft. bgl, and a 8 7/8-inch borehole from 10 to 950 ft. bgl. It was completed with 5 1/2-inch steel casing from +3 to 750 ft. bgl, 5 1/2-inch steel screen from 750 to 940 ft. bgl, and 5 1/2-inch steel casing from 940 to 950 ft. bgl. Table 1 provides a well construction summary; Figure 9 provides a well profile schematic.

According to an interpretation of the geophysical logs at Citizen House Ledgestone Well No. 1, the Upper Glen Rose is present from the ground surface to 293 ft. bgl, the Lower Glen Rose from 293 to 488 ft. bgl, the Hensell from 488 to 526 ft. bgl, the Cow Creek from 526 to 593 ft. bgl, the Hammett from 593 to 633 ft. bgl, the Sligo from 633 to 695 ft. bgl, the Hosston from 695 to total depth. The Lower Trinity Aquifer is under confined conditions at Citizen House Ledgestone Well No. 1 (Appendix C).

Citizen House 290 (CH 290) Well No. 1

According to the State of Texas well report (Tracking No. 696101), Well No. 1 was completed by Bee Cave Drilling on April 7, 2025 (Appendix B). The well was drilled to a depth of 920 ft. bgl with a 10 5/8-inch borehole from 0 to 10 ft. bgl, and a 8 7/8-inch borehole from 10 to 920 ft. bgl. It was completed with 5 1/2-inch steel casing from +3 to 720 ft. bgl, 5 1/2-inch steel screen from 720 to 910 ft. bgl, and 5 1/2-inch steel casing from 910 to 920 ft. bgl. Table 2 provides a well construction; Figure 10 provides a well profile schematic.

According to an interpretation of the geophysical logs at Well No. 1, the Upper Glen Rose is present from the ground surface to 285 ft. bgl, the Lower Glen Rose from 285 to 483 ft. bgl, the Hensell from 483 to 527 ft. bgl, the Cow Creek from 527 to 585 ft. bgl, the Hammett from 585 to 623 ft. bgl, the Sligo from 623 to 685 ft. bgl, the Hosston from 685 to total depth. The Lower Trinity Aquifer is under confined conditions at CH 290 Well No. 1 (Appendix C).

Ledgestone Townhomes (LT) Well No. 1

According to the State Well Report (Tracking No. 696109), Ledgestone Townhomes Well No. 1 was completed by Bee Cave Drilling on April 11, 2025 (Appendix B). The well was drilled to a depth of 1,000 ft. bgl with a 10 5/8-inch borehole from 0 to 10 ft. bgl, and a 8 7/8-inch borehole from 10 to 1,000 ft. bgl. It was completed with 5 1/2-inch steel casing from +3 to 800 ft. bgl, 5 1/2-inch steel screen from 800 to 990 ft. bgl, and 5 1/2-inch steel casing from 990 to 1,000 ft. bgl. Table 1 provides a well construction summary; Figure 11 provides a well profile schematic.

According to an interpretation of the geophysical logs at Ledgestone Townhomes Well No. 1, the Upper Glen Rose is present from the ground surface to 348 ft. bgl, the Lower Glen Rose from 348 to 540 ft. bgl, the Hensell from 540 to 578 ft. bgl, the Cow Creek from 578 to 643 ft. bgl, the Hammett from 643 to 682 ft. bgl, the Sligo from 682 to 743 ft. bgl, the Hosston from 743 to total depth. The Lower Trinity Aquifer is under confined conditions at Ledgestone Townhomes Well No. 1 (Appendix C).

Table 2: Well Construction Summary

Well	State Well Report Tracking No.	Elevation (ft. MSL)	Drill Date	Aquifer	Well Depth (ft. bgl)	Static Water Level (ft. bgl; date; ft. MSL)	Borehole (diameter; ft. bgl)	Casing (diameter; material; ft. bgl)	Screen (diameter; material; ft. bgl)
CHL Well No. 1	696105	1,003’	4/15/2025	Lower Trinity	950’	521.6’ (4/22/2025) 481.4’	10 5/8” (0’ - 10’) 8 7/8” (10’ - 950’)	5 1/2” Steel (+3’ - 750’, 940’ – 950’)	5 1/2” Steel Screen (750’ - 940’)
CH 290 Well No. 1	696101	972’	4/7/2025	Lower Trinity	920’	497.5’ (4/22/2025) 474.5’	10 5/8” (0’ - 10’) 8 7/8” (10’ - 920’)	5 1/2” Steel (+3’ - 720’, 910’ – 920’)	5 1/2” Steel Screen (720’ - 910’)
LT Well No. 1	696109	1,061’	4/11/2025	Lower Trinity	1,000’	582.3’ (4/29/2025) 478.7’	10 5/8” (0’ - 10’) 8 7/8” (10’ – 1,000’)	5 1/2” Steel (+3’ - 800’, 990’ – 1,000’)	5 1/2” Steel Screen (800’ - 990’)

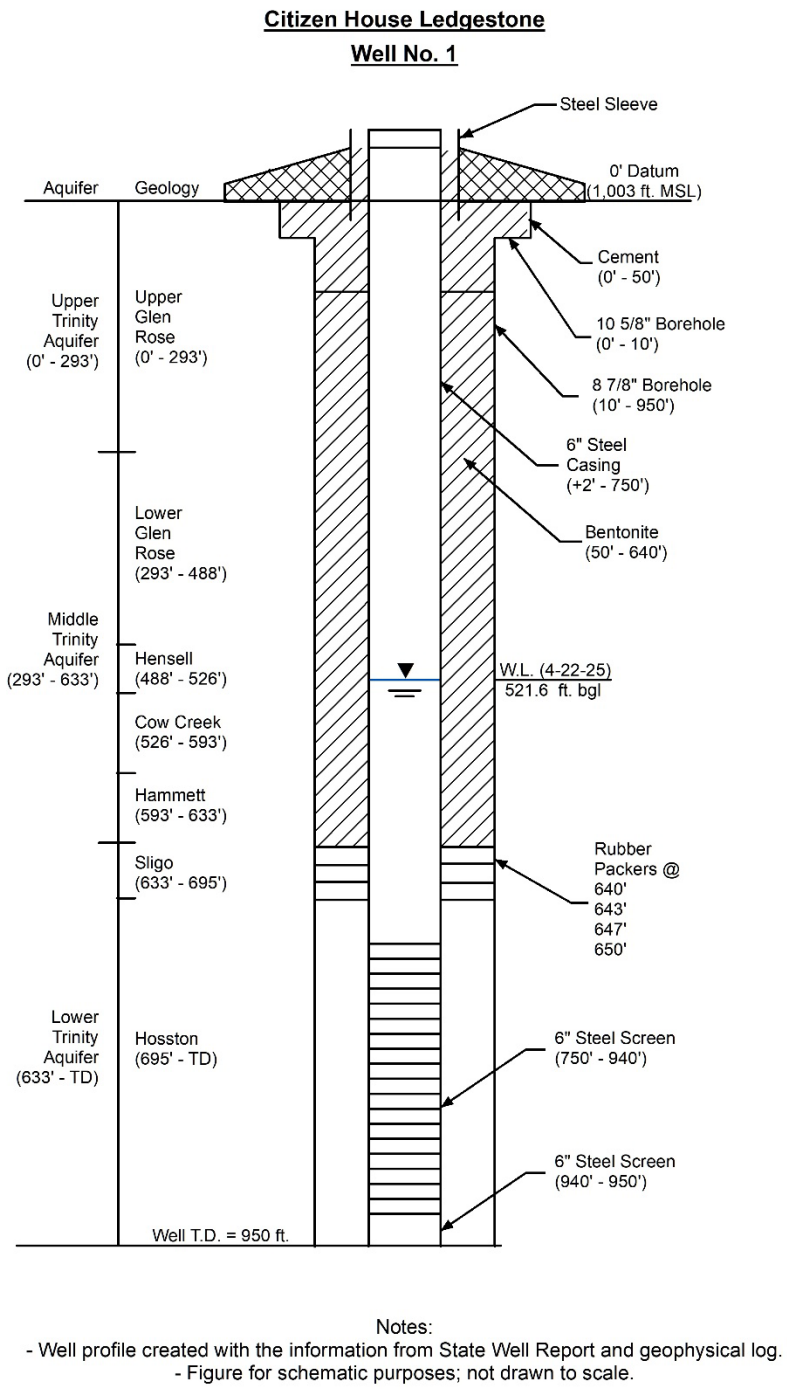
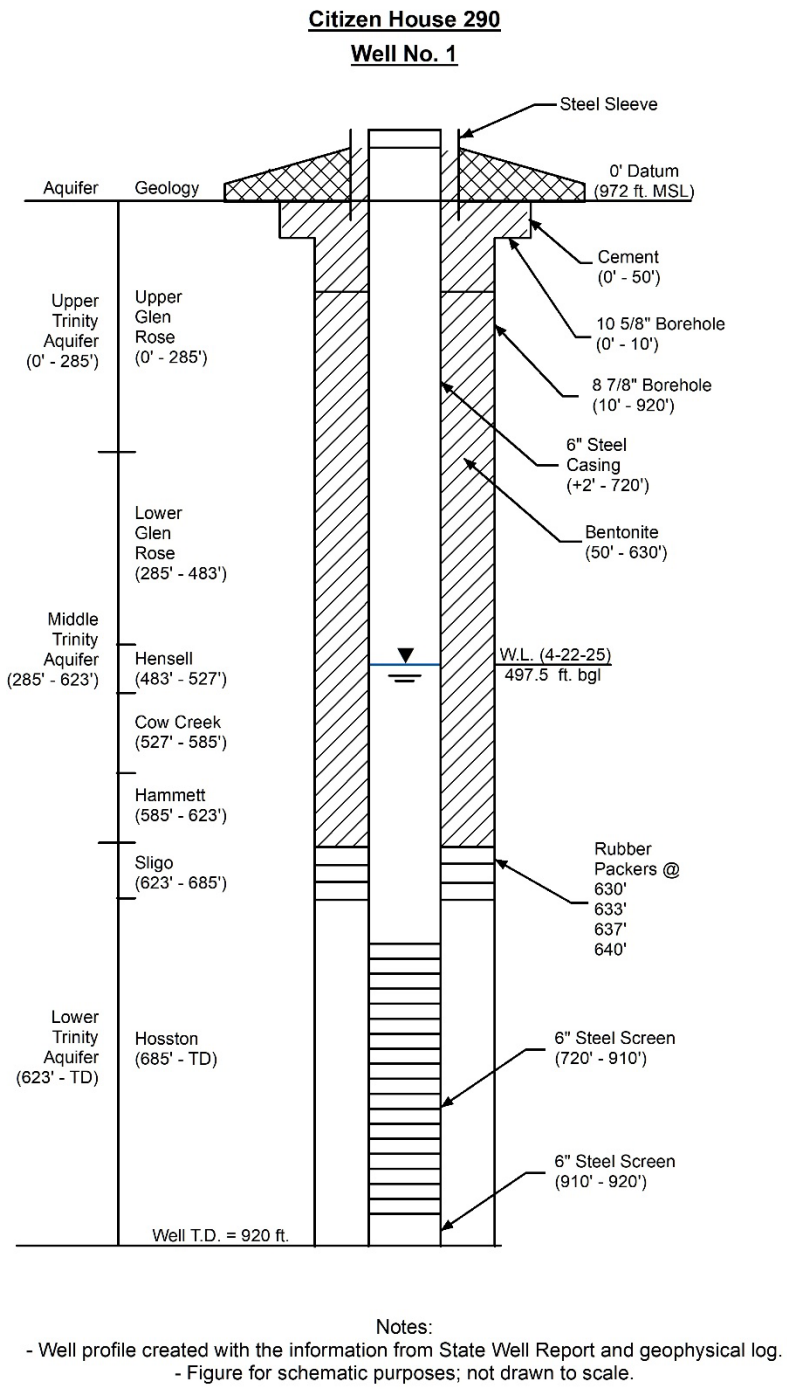


Figure 9: Well profile schematic of the Citizen House Ledgestone Well No. 1



Notes:
- Well profile created with the information from State Well Report and geophysical log.
- Figure for schematic purposes; not drawn to scale.

Figure 10: Well profile schematic of the Citizen House 290 Well No. 1

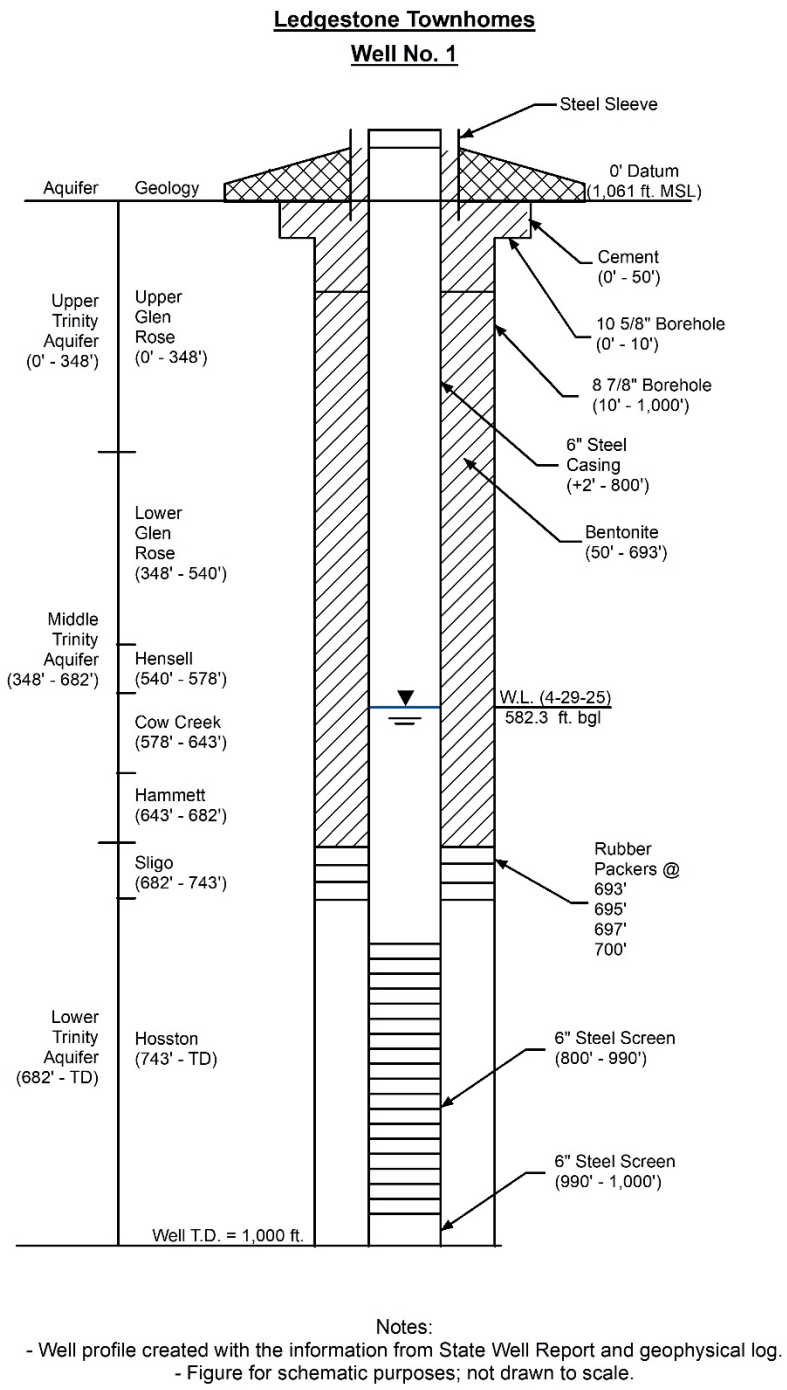


Figure 11: Well profile schematic of the Ledgestone Townhomes Well No. 1

V.2. Aquifer Testing

Aquifer tests allow for the estimation of transmissivity, hydraulic conductivity, specific capacity, and storativity of wells when at least one observation well is available and drawdown is observed. The objective was to perform the aquifer test with a 24-hour pumping phase followed by a recovery phase in which the pumping well achieved 90% recovery or more. Prior to the start of the aquifer test, pressure transducers capable of measuring the water level and temperature at one-minute intervals were placed in the pumping and observation wells to gather data throughout the duration of the test. Flow meter readings and water levels were taken prior to, during, and at the conclusion of the test. The data from the aquifer tests were analyzed using the Cooper and Jacob (1946) and Theis (1935) solutions in the Aqtesolv software suite (Duffield, 2007). Table 3 provides a summary of the aquifer testing results; Appendix D provides the analyses; Figures 12 through 14 provide hydrographs showing water levels in the pumping and observation wells during the aquifer testing.

In cooperation with the SWTCGCD, the following actions were taken to ensure an acceptable aquifer test for the CHL Well No. 1:

- Static water levels in the pumping and observation wells were measured one week prior to the pumping phase of the test utilizing an electric line and a pressure transducer (In-Situ Level Troll 400; accurate to the nearest 0.01 ft.). Pressure transducers were utilized in the active pumping well and observation wells during the pumping and recovery phase of the test. This aquifer test was the second of three (3) aquifer tests to be performed; prior to starting the test, the static water level in the wells were allowed more than 5 days to recover;

- A total of 41,362.1 gallons were pumped during the aquifer test (Appendix D). SWTCGCD recommended a total volume for the test of 40,822 gallons due to the current drought conditions. The pumped volume represents approximately 5 times the daily equivalent volume of the requested permit;

- Discharge from the pumping well was routed away from the well site to ensure no return flow occurred within the pumping well. The discharge was carefully monitored during the pumping phase to minimize impact (i.e. erosion, roadway hazards, upset neighbors); and,

- 90% recovery of water level was achieved in CHL Well No. 1 after 4.95 hours of recovery.

<u>Aquifer Test – CHL Well No. 1 (May 6, 2025)</u>

The aquifer test of CHL Well No. 1 was conducted with CH 290 Well No. 1 and LT Well No. 1 serving as the observation wells. The observation wells are located approximately 894 and 990 feet from the pumping well, respectively. A 7.5 horsepower (HP) submersible pump was set in the pumping well on 840 feet of 1 1/2-inch steel column pipe. The pumping phase started at 11:58 AM on May 6, 2025; the water levels were monitored for 22.1 hours of pumping and for 143.9 hours of recovery. Prior to the pumping phase of the aquifer test, the static water level in CHL Well No. 1 was measured at 523.6 ft. bgl (479.4 ft. MSL), 501.5 ft. bgl (470.5 ft. MSL) in CH 290 Well No. 1 and 582.8 ft. bgl (478.2 ft. MSL) in LT No. 1.

CHL Well No. 1 was pumped at an average rate of 31.2 gallons per minute (gpm) throughout the pumping phase; the initial rate was 38 gpm and the final measured pumping rate was 31 gpm with 131.25

feet of drawdown, resulting in a specific capacity of 0.24 gpm/ft. In the initial portion of the pumping phase, the generator malfunctioned, causing the pumping rate to stop for approximately 4 minutes. Once the pumping resumed, the water level declined steadily until the pump was shutoff, reaching a pumping water level of approximately 654.9 ft. bgl (Figure 12). The pumping phase of the aquifer test was shortened in order to meet the recommended pumping volume. After the pump was shut off, recovery was measured; the water level in the pumping well recovered 90% in approximately 4.95 hours (Figure 12). There were no aquifer boundary conditions observed during the testing.

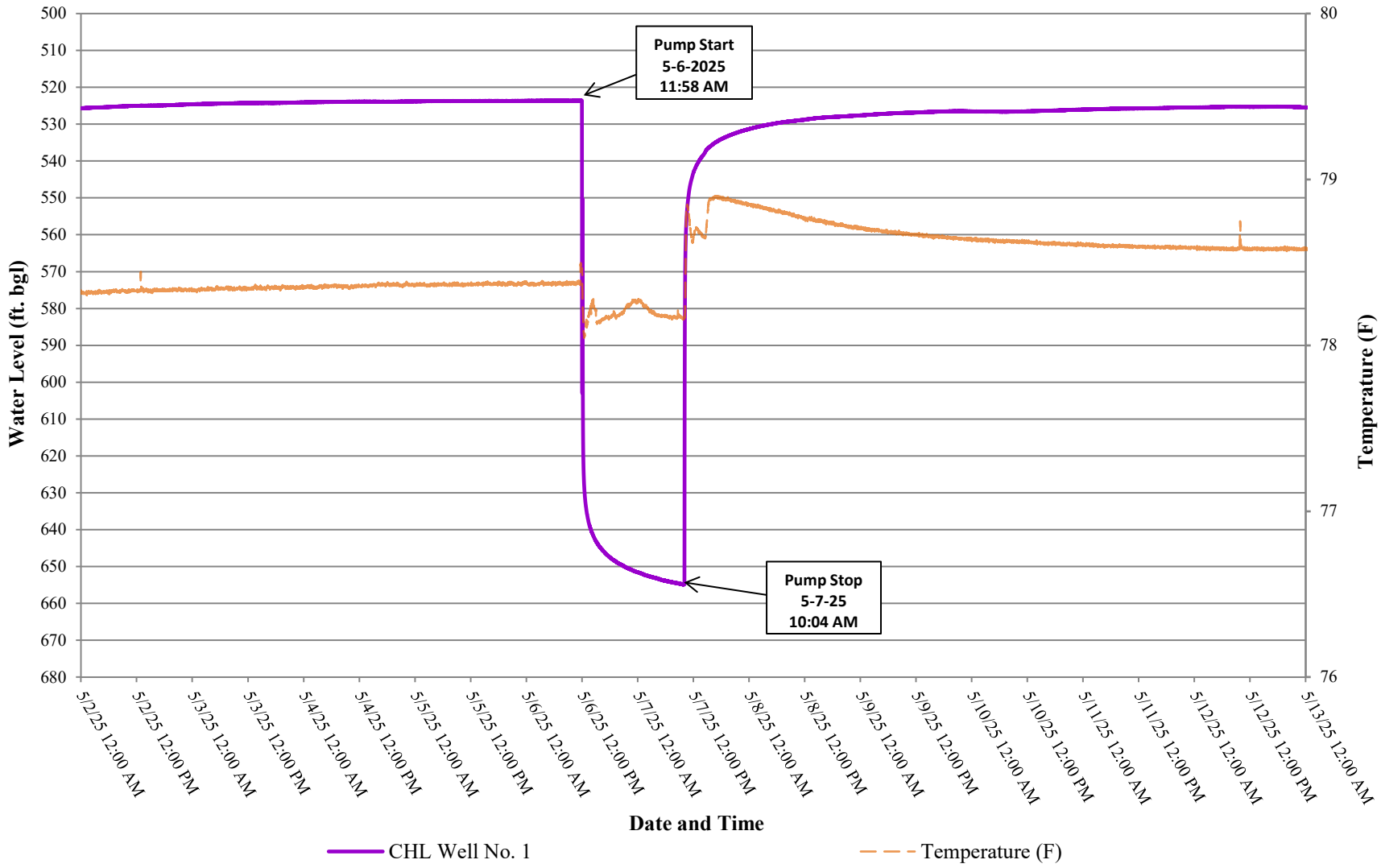


Figure 12: Aquifer test hydrograph of the CHL Well No. 1 (May 6, 2025)

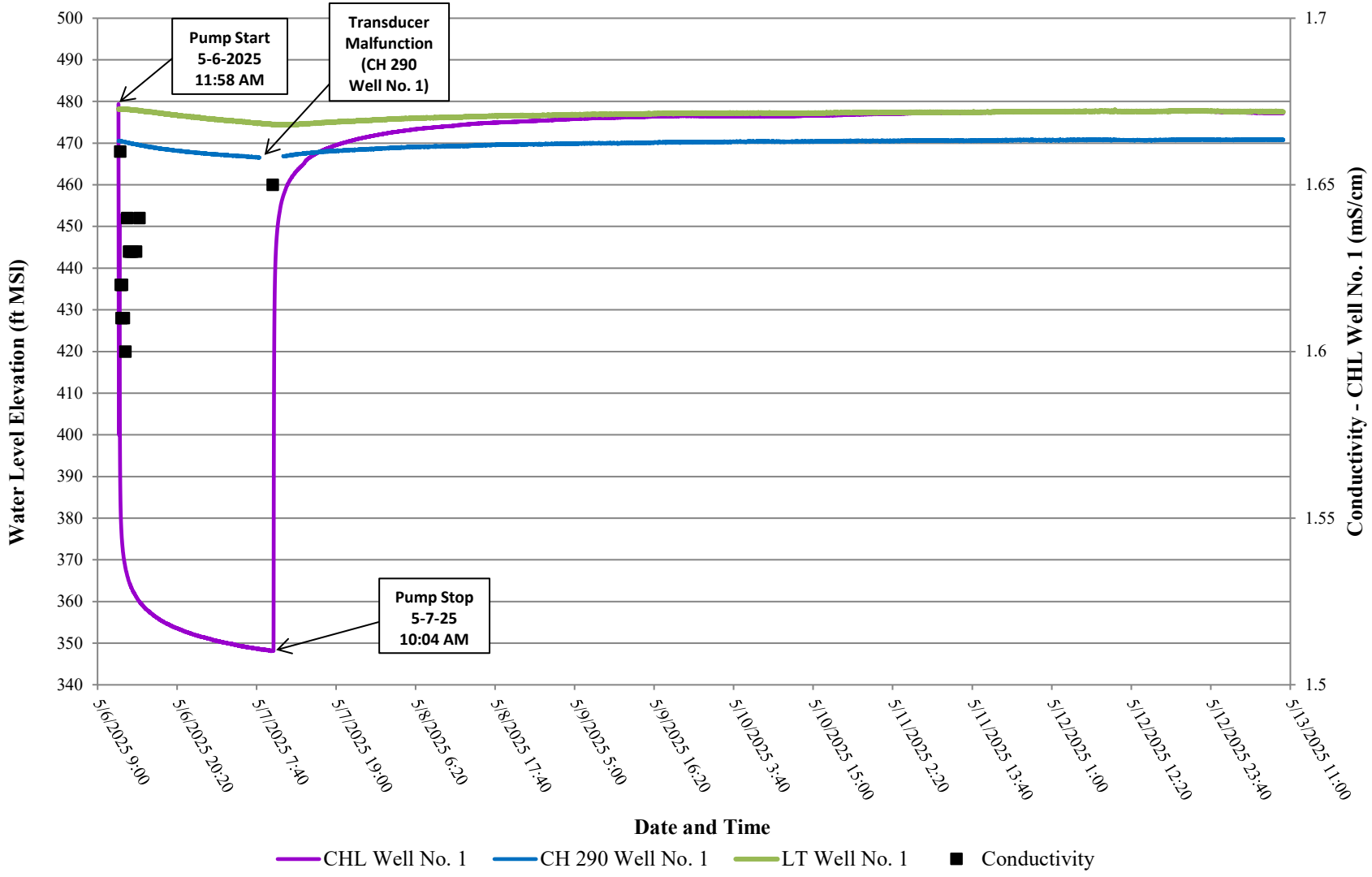


Figure 13: Aquifer Test hydrograph of CHL Well No. 1 and Observation Wells with field conductivity (May 6, 2025)

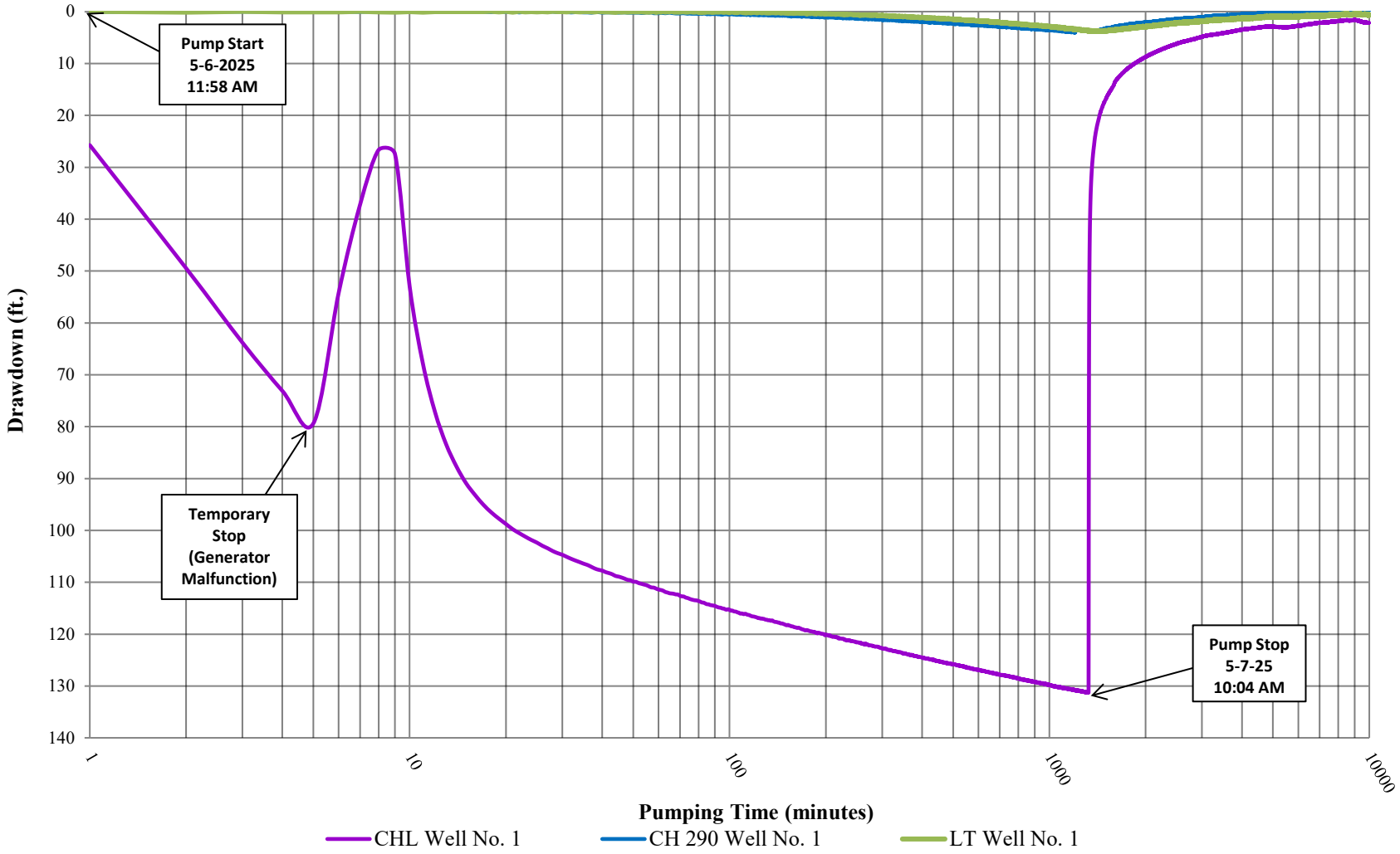


Figure 14: Drawdown hydrograph (semi-log plot) of CHL Well No. 1 and Observation Wells (May 6, 2025)

After 5 days since the pump was shut off, neither the pumping well nor the LT Well No. 1 fully recovered to the pre-test static water levels; however, CH 290 Well No. 1 fully recovered within 68 hours after the pump was shut off. This could be due to a decreasing water level trend in the area noted by background water level measurements and from nearby District and TWDB monitor wells. In theory, the water level should recover at the same rate the water level drew down during the recovery phase. In reality, however, the rate to achieve 90% recovery may take longer. Driscoll (1986) points out that *"drawdown and recovery should be identical if the aquifer conditions conform to the basic assumptions of the Theis concept… Complete recovery generally requires a period considerably longer than the previous pumping period, except in cases where recharge to the aquifer occurs during the pumping and recovery periods. The storativity for a confined aquifer depends upon the elastic properties of the formation. If the aquifer is not perfectly elastic, it does not rebound vertically during recovery of water levels (recovery of pressure) at the same rate that it is compressed as a result of the drawdown during the preceding pumping."* The heterogeneity, anisotropy, and non-perfect elasticity characteristics of the Lower Trinity Aquifer may explain the delayed recovery rates post pumping phase of the aquifer test.

The data from the aquifer test was analyzed using the Cooper-Jacob (1946) and Theis (1935) solutions in the Aqtesolv software suite (Duffield, 2007). The results of the aquifer testing were representative of a slightly heterogeneous system. Table 3 provides a summary of the aquifer testing results. The average calculated transmissivity for the CHL Well No. 1 was 74.85 $ft.^2$/day from both the Theis and Cooper-Jacob methods (Table 3). During the aquifer test, the CH 290 Well No. 1 and the LT Well No. 1 had a maximum drawdown of 4.0 feet and 3.7 feet, respectively (Figure 13; Table 3). The pressure transducer within CH 290 Well No. 1 malfunctioned and was replaced near the end of the pumping phase/ start of the recovery phase (Figure 13). The storativity was calculated for the observation wells using both the Theis and Cooper-Jacob methods, resulting in an average value of 9.14 x 10^{-5} (Table 3). The comparatively lower transmissivity value that was calculated for the pumping well may be partially due to several factors, including well efficiency, skin effects near the open well bore, insufficient well development upon construction, aquifer heterogeneity, and/or turbulent flow within the pumping well.

Table 3: Summary of aquifer test results

Test Date	Well	Final Pump Rate (gpm)	Drawdown (ft.)	Specific Capacity (gpm/ft)	Analytical Method	Transmissivity (ft^2/day)	Storativity	Aquifer Thickness (ft.)
May 6, 2025	CHL No. 1 (PW)	31	131.25	0.24	Theis	74.85	-	317
					Cooper-Jacob	74.85	-	
	CH 290 No. 1 (OW)	-	4.0	-	Theis	280.5	8.29 x 10^{-5}	297
					Cooper-Jacob	272.6	6.99 x 10^{-5}	
	LT No. 1 (OW)	-	3.7	-	Theis	171.1	1.20 x 10^{-4}	318
					Cooper-Jacob	202.9	9.27 x 10^{-5}	
Notes: ft. = feet; gpm = gallons per minute; PW = Pumping Well; OW = Observation Well								

V.3. Water Quality

A water quality sample was collected from the pumping well at the end of the pumping phase of

the aquifer test. The sample was collected by Aqua-Tech Laboratories, Inc. staff in a sealed container and stored on ice in a cooler. The water quality parameters analyzed were outlined in the aquifer test work plan approved by SWTCGCD staff. Appendix E includes the laboratory water quality reports. In addition to the laboratory analyzed samples, field parameters were taken for pH and specific conductance periodically during the pumping phase of the test. Table 4 provides the water quality summary of the samples. The results were compared to Texas Commission on Environmental Quality (TCEQ) Maximum Contaminant Levels (MCL) and Secondary Contaminant Levels (SCL). The results show all constituents met the TCEQ MCLs and all the SCLs with the exception of total dissolved solids (TDS; 1,030 mg/L) and sulfate (638 mg/L) within CHL Well No. 1.

Table 5 provides the field parameter data collected during the aquifer test, including pH and specific conductance taken at various times during the pumping phase of the aquifer test. The results indicate that the pH and specific conductance slightly changed throughout the test. The reason for the slight increase in pH is unknown; however, the increase could be attributed to chemical residues leftover from the drilling process (i.e. drilling mud and/or sodium based solutions). No negative impacts to water quality are anticipated with prolonged production from CHL Well No. 1.

Table 4: CHL Well No. 1 water quality summary

Well	Date	pH	TDS	Cl	F	Fe	NO_3	Al	As	Cu	Mn	Zn	SO_4	Na	Ca	Alk as $CaCO_3$	Mg	K
		Maximum and Secondary Contaminant Levels (MCL/SCL) Units in mg/L																
		≥ 7.0[2]	1,000[2]	300[2]	4.0[1] & 2.0[2]	0.3[2]	10[1]	0.2[2]	0.01[1]	1.0[2]	0.05[2]	5.0[2]	300[2]	300[2]	-	-	-	-
No. 1	5/7/2025	7.5	**1,030**	35.8	0.55	0.261	<0.02	0.003	0.005	<0.001	0.01	< 0.005	**638**	96.4	117	226	78.4	17.9
Note: 1 = TCEQ Maximum Contaminant Level; 2 = TCEQ Secondary Contaminant Level; Concentrations in **red** are above TCEQ SCLs																		

Table 5: CHL Well No. 1 field water quality summary

Date	pH	Specific Conductance (mS/cm)
5/6/2025 12:13 PM	7.40	1.66
5/6/2025 12:18 PM	7.44	1.62
5/6/2025 12:23 PM	7.54	1.61
5/6/2025 12:28 PM	7.55	1.62
5/6/2025 12:43 PM	7.55	1.61
5/6/2025 12:58 PM	7.55	1.60
5/6/2025 1:13 PM	7.60	1.64
5/6/2025 1:28 PM	7.63	1.63
5/6/2025 1:43 PM	7.65	1.63
5/6/2025 1:58 PM	7.65	1.63
5/6/2025 2:28 PM	7.64	1.63
5/6/2025 2:58 PM	7.63	1.64
5/7/2025 09:58 AM	7.60	1.65
Notes: measurements taken by Wet Rock Groundwater Services, LLC		

Section VI: Potential Unreasonable Impacts Analysis

As required by the SWTCGCD, the effects of current and projected pumpage on water levels on surrounding wells for a one week, one year, and seven year period were estimated using the Theis equation (Theis, 1935).

The Theis equation has several critical assumptions used to derive the formula which include (Driscoll, 1986):

1. The water-bearing formation is uniform in character and the hydraulic conductivity is the same in all directions;
2. The aquifer is uniform in thickness and infinite in areal extent;
3. The aquifer receives no recharge from any source;
4. The well penetrates, and receives water from the full thickness of the aquifer;
5. The water from storage is discharged instantaneously when the head is lowered;
6. The pumping well is 100% efficient;
7. All water removed from the well comes from aquifer storage;
8. Laminar flow exists through the well and aquifer; and,
9. The water table or potentiometric surface has no slope.

It is important to note that several of the assumptions used to derive the Theis equation are not necessarily appropriate for the Trinity Aquifer. These include assumptions 1, 3 and 7. In addition, the Theis assumptions that (i) the formation receives no recharge from any source and (ii) that all water removed from the well comes from aquifer storage may lead to inaccuracies in estimating drawdown. Driscoll (1986) states, "The assumption that an aquifer receives no recharge during the pumping period is one of the six fundamental conditions upon which the non-equilibrium formulas (Theis) are based. Therefore, all water discharged from a well is assumed to be taken from storage within the aquifer. It is known, however that most formations receive recharge. Hydrographs from long-term observation wells monitored by the US Geological Survey, various state agencies, and similar data-gathering agencies in other parts of the world show that most water-bearing formations receive continual or intermittent recharge."

Furthermore, contrary to the Theis assumptions, Konikow and Leake (2014) note that with increased pumping time, (i) the fraction of pumpage derived from storage tends to decrease, and (ii) the fraction derived from capture (recharge) increases (Figure 15). Eventually a new equilibrium will be achieved when no more water is derived from storage and heads, or water levels, in the aquifer stabilize. This result is achieved when the initial cone of depression formed by discharge reaches a new source of water, typically the recharge zone of the aquifer. The actual response time for an aquifer system to reach a new equilibrium is a function of the dimensions, hydraulic properties, and boundary conditions for each specific aquifer. For example, the response time will decrease as the hydraulic diffusivity of the aquifer increases (Theis 1940; Barlow and Leake 2012). The response time can range from days to millennia (Bredehoeft and Durbin 2009; Walton 2011).

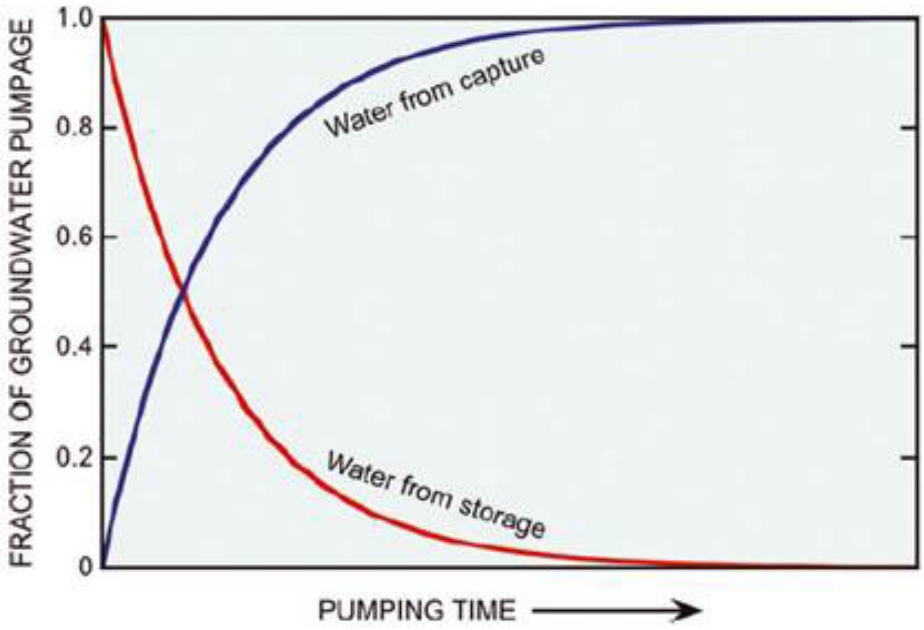


Figure 15: Water sources to a pumping well over time (from Konikow and Leake (2014))

Since the Theis equation (Theis, 1935) assumes (i) that all water is derived from storage and (ii) that the aquifer receives no recharge, the Theis equation may overestimate drawdown within a well that is located in an aquifer that receives rapid recharge.

The groundwater model was designed to estimate drawdown for CHL Well No. 1 pumping for 1 week (5.67 gpm; 57,153 gallons total), 1 year (5.67 gpm; 2,980,152 gallons total), and 7 years (5.67 gpm; 20,861,064 gallons total). The following values used for the drawdown calculations are summarized below:

- CHL Well No. 1 Production Rate: 5.67 gpm (2,980,152 gallons per year). Note – the production rate was rounded to the nearest thousandth, resulting in a larger volume than the requested permit volume;
- Transmissivity value of 74.85 ft^2/day was obtained from the average transmissivity values calculated from the pumping well; and,
- Storativity value of 9.14×10^{-5} was obtained from the average storativity values calculated from the observation wells.

The results of the model are summarized in Figures 16 through 21. Table 6 provides a summary of the modeling results on observation wells with only CHL Well No. 1 pumping.

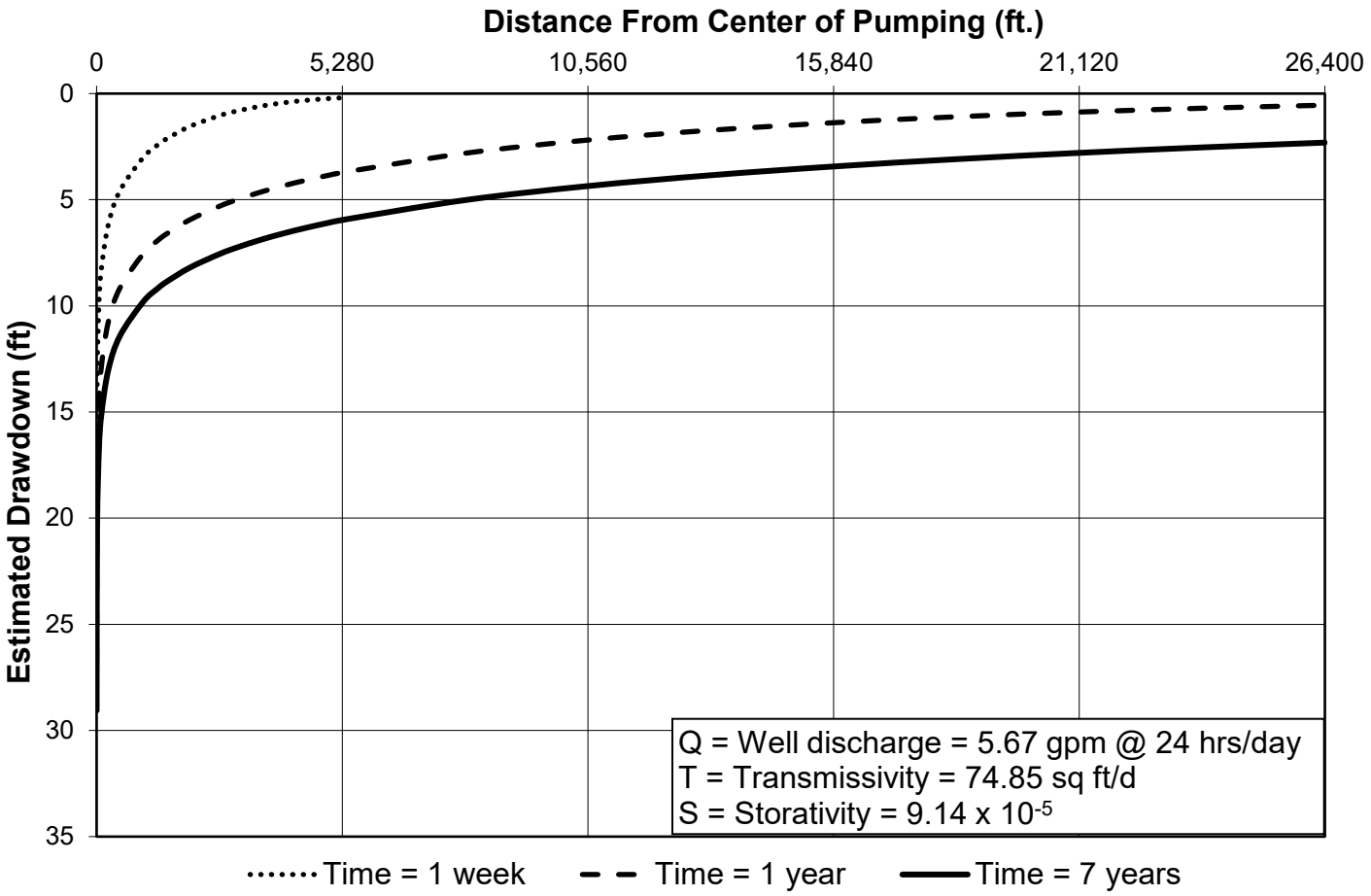


Figure 16: CHL Well No. 1 distance-drawdown estimations

Table 6: Summary of the projected drawdown resulting from production at CHL Well No. 1

Map ID	Latitude Longitude	State Well Report Tracking Number	Total Depth (ft.)	Aquifer	Distance from Pumping Well (ft.)	Drawdown After 1-Week Pumping (ft.)	Drawdown After 1-year Pumping (ft.)	Drawdown After 7-years pumping (ft.)
CHL Well No. 1	30.228806 -97.924056	696105	950	Lower Trinity	0	22.21	26.80	29.06
CH 290 Well No. 1	30.229222 -97.921444	696101	920	Lower Trinity	894	3.27	7.81	10.07
LT Well No. 1	30.228 -97.926861	696109	1,000	Lower Trinity	990	3.04	7.58	9.83

Figure 17 provides a well profile with the static water levels measured prior to starting the aquifer test, maximum drawdown recorded during the aquifer test, and the estimated drawdown after 7 years of pumping.

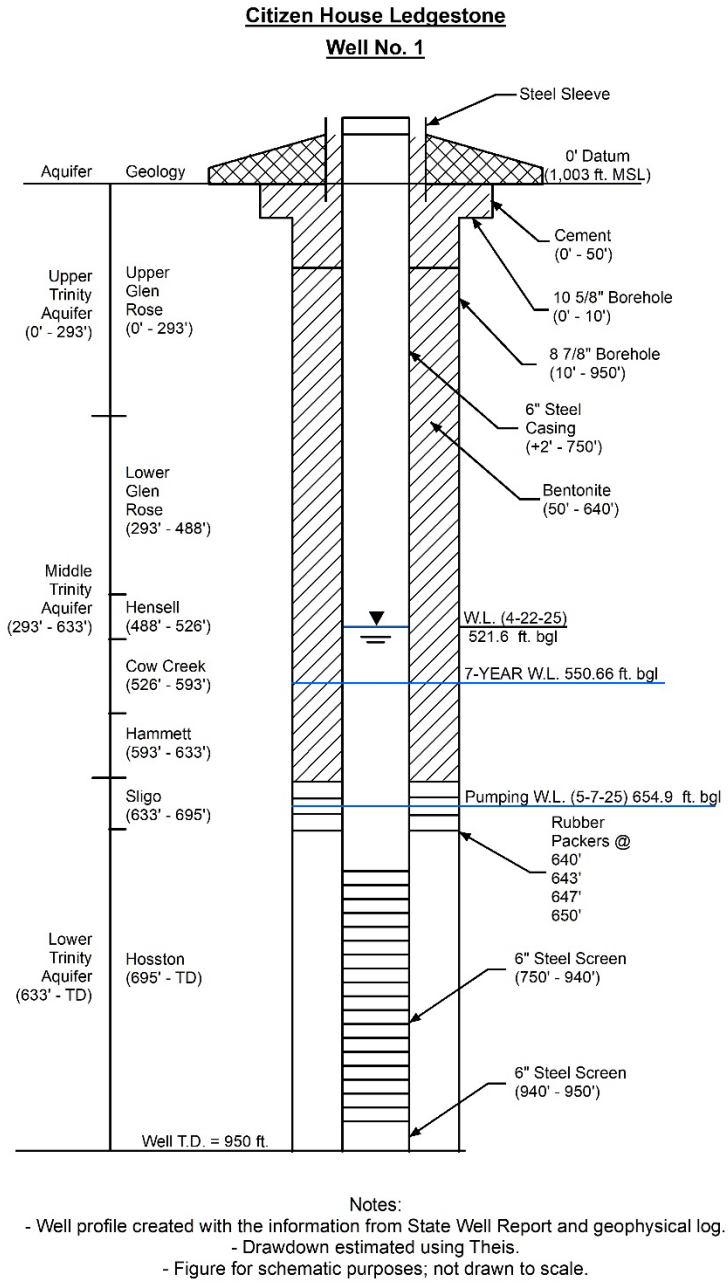


Figure 17: Well profile schematic of the CHL Well No. 1 with theoretical drawdown estimate

Figures 18 through 20 provide plan view maps of theoretical maximum drawdown after 1 week, 1 year, and 7 years of continuous pumping. Wells shown in Figured 18 through 20 were obtained from well records in the TWDB database.

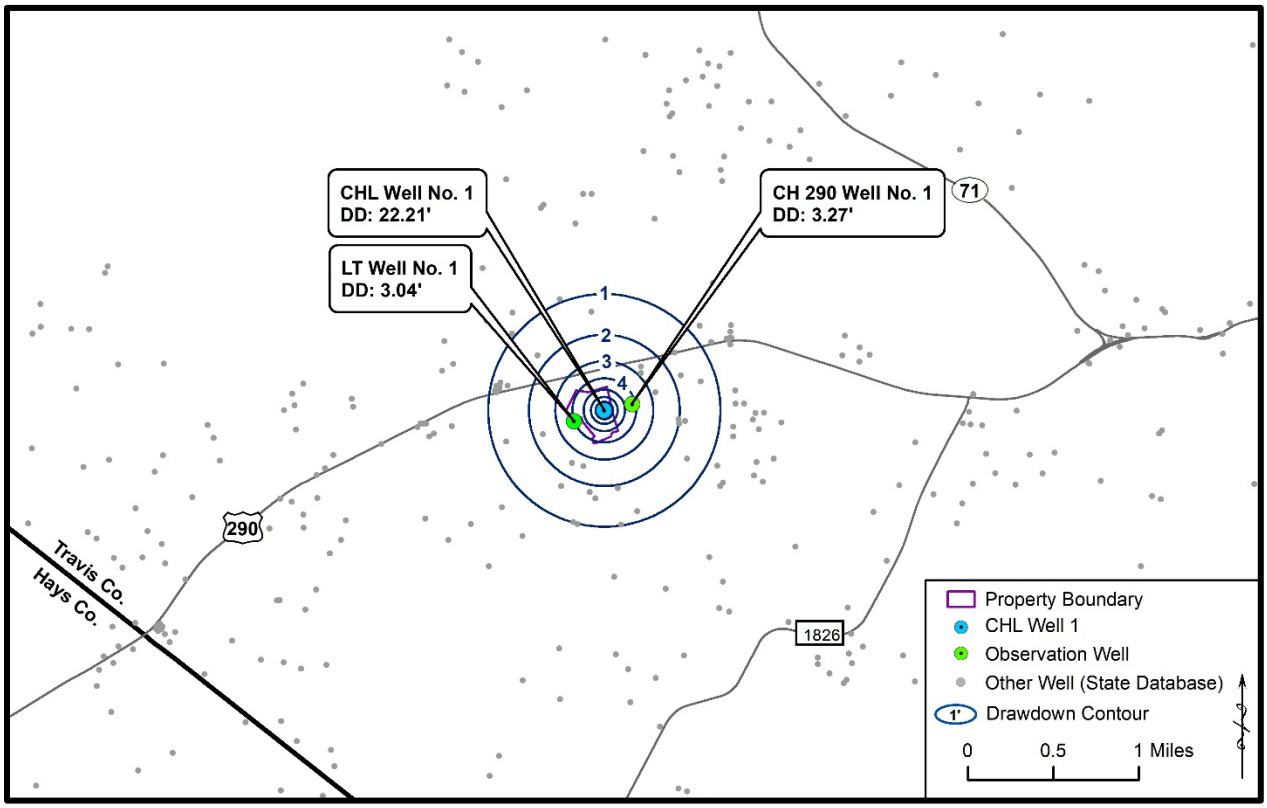


Figure 18: Estimated drawdown after 1 week of pumping

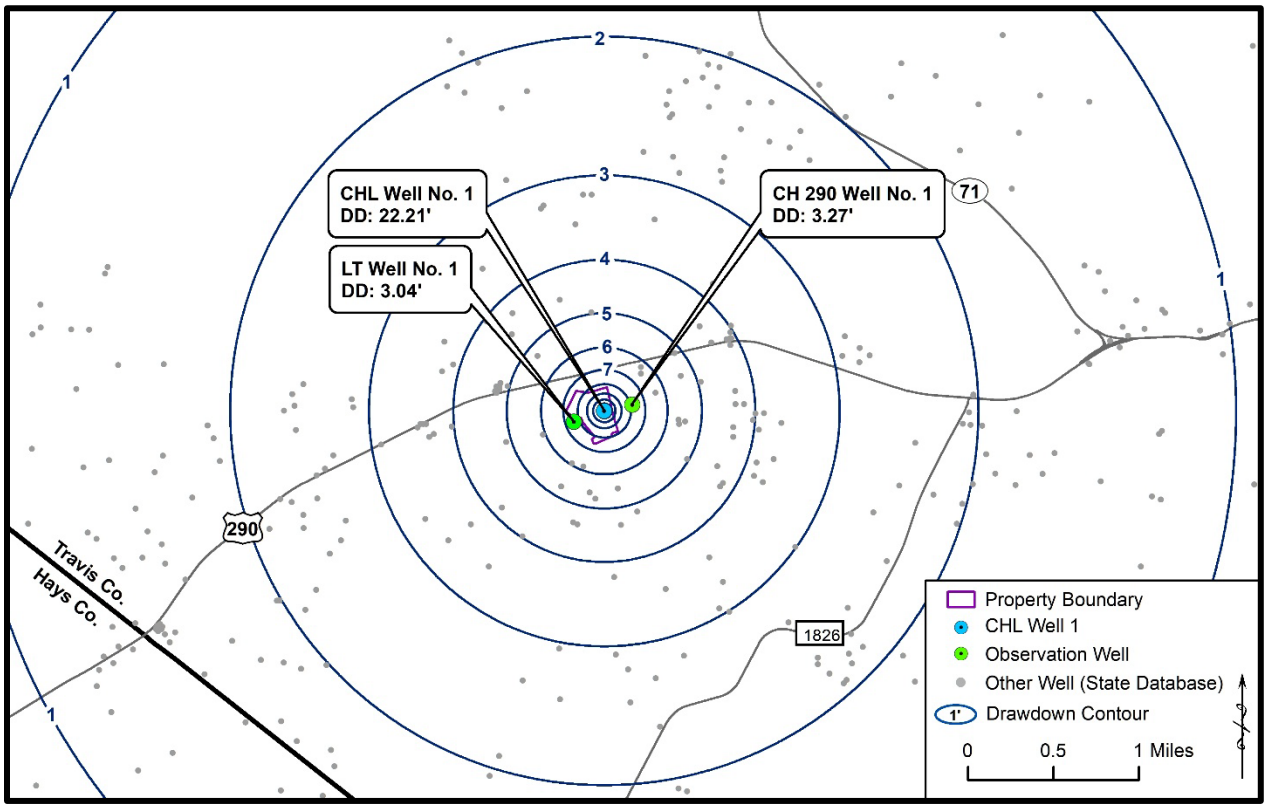


Figure 19: Estimated drawdown after 1 year of pumping

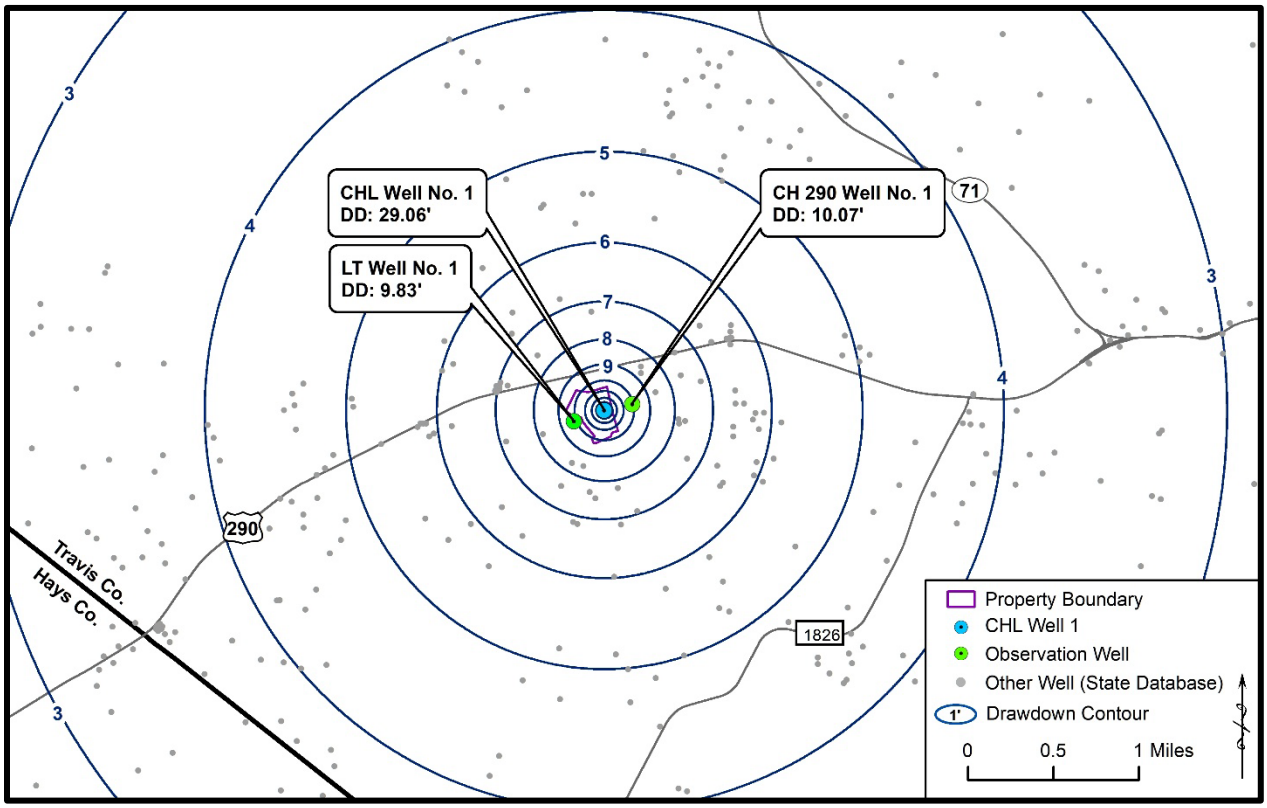


Figure 20: Estimated drawdown after 7 years of pumping

Based upon the drawdown calculated from the distance-drawdown projections, the drawdown after 1 week of production at 5.67 gpm from CHL Well No. 1 results in 22.21 feet of drawdown at the well. The extent of the cone of depression within the Lower Trinity Aquifer is approximately 0.67 miles, where the drawdown equals 1 foot (Figure 18). The drawdown after 1 year of production at 5.67 gpm from the pumping well results in 26.80 feet of drawdown at the well. At a distance of 3.7 miles from the well, the drawdown equals approximately 1 feet within the Lower Trinity Aquifer (Figure 19). The drawdown after 7 years of production at 5.67 gpm from the pumping well results in 29.06 feet of drawdown at the well. At a distance of 3.65 miles from the well, the drawdown equals approximately 3 feet within the Lower Trinity Aquifer (Figure 20). Based upon the results of the aquifer testing and subsequent modeling, drawdown will likely be experienced in neighboring wells completed within the Lower Trinity Aquifer within a 4-mile radius; however, that drawdown is not expected to have any unreasonable impacts on the aquifer or surrounding wells, springs, or surface water due to the static water level and relatively low pumping volumes.

Figure 21 provides a hydrogeologic cross-section of the project area showing the estimated water levels in neighboring wells along with the modeled water levels after 7 years of proposed pumping. The static water levels in Well ID 58491RU were estimated; other water level data were sourced from field measurements or published records.

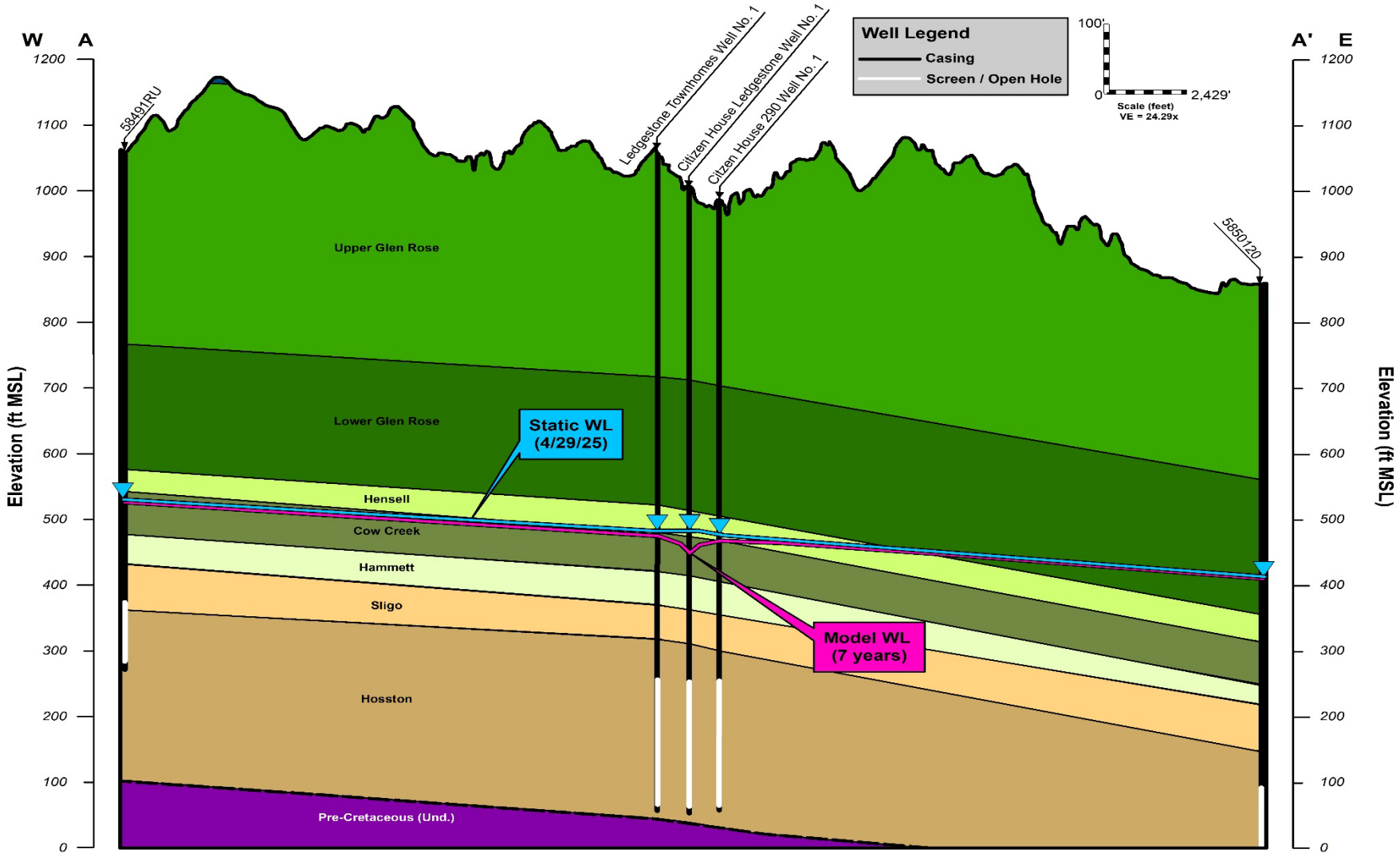


Figure 21: Geologic cross section with estimated 7-year water levels

The Modeled Available Groundwater (MAG) volume of the Trinity Aquifer for Groundwater Management Area (GMA) 9, within SWTCGCD ranges from 8,542 to 8,485 acre-ft/yr, for the years 2030 to 2060 (Table 7). The requested annual permit volume for the CHL Well No. 1 is 2,980,000 gallons per year (9.15 acre-ft/yr) which represents approximately 0.11% of the total MAG volume (Table 7). The DFC for the Trinity Aquifer within GMA 9, adopted on 11/15/21 states an "increase in average drawdown of approximately 30 feet through 2060 [no more than 30 feet of average water level decline in 2016, as compared to 2008 water levels]". The requested permit volume is comparatively low (0.11% of the MAG) therefore, the proposed pumping should have little to no impact on the DFC.

Table 7: Total Production and Desired Future Conditions

Year	MAG for Trinity Aquifer (Acre-ft/yr)	Requested Permit Volume (Acre-ft/yr)	Percentage of MAG
2030	8,542	9.15	0.11
2040	8,530	9.15	0.11
2050	8,515	9.15	0.11
2060	8,485	9.15	0.11
Notes: MAG = Modeled Available Groundwater			

Section VII: Conclusions

This report details the results of a hydrogeologic study to meet the guidelines mandated by the Southwestern Travis County Groundwater Conservation District (SWTCGCD) for a regular production permit application. OP III ATX Ledgestone I, LP is submitting a non-agricultural operating permit application to produce up to 2,980,000 gallons per year from a newly constructed Lower Trinity Aquifer well located in southwestern Travis County. Water produced from the completed well will serve the sole purpose of irrigation within the property boundary. The conclusions from this report are as follows:

- Citizen House Ledgestone (CHL) Well No. 1 is located within property acquired by OP III ATX Ledgestone I, LP and will be discharged into an onsite irrigation system. The anticipated pumping rate for the well is 35 gallons per minute. The pumping schedule for water to be produced from the well will be dependent upon irrigation demand and local precipitation; the majority of use will likely occur in the summer months;

- An aquifer test work plan was designed and approved by SWTCGCD staff prior to starting the field work. To meet the guidelines for the SWTCGCD Tier 2 report and to adequately assess the properties of the Lower Trinity Aquifer, an aquifer test was conducted by utilizing the newly completed CHL Well No. 1 and two (2) nearby newly completed Lower Trinity Aquifer wells;

- The aquifer test consisted of pumping the well for at least 22 hours followed by a recovery phase while continuously measuring water levels in the pumping and observation wells. A total of 41,362.1 gallons were pumped during the aquifer testing. SWTCGCD recommended a total volume for the test of 40,822 gallons due to the current drought conditions. The pumped volume represents approximately 5 times the daily equivalent volume of the requested permit. During the pumping phase of the test, CHL Well No. 1 was pumped at an average rate of 31.2 gpm; the initial rate was 386 gpm and the final measured pumping rate was 31 gpm with 131.25 feet of drawdown, resulting in a specific capacity of 0.24 gpm/ft.;

- The average calculated transmissivity for CHL Well No. 1 was 74.85 $ft.^2$/day from the Cooper and Jacob and Theis methods. Drawdown was observed in the two observation wells; therefore, the average calculated storativity value using both the Theis and Cooper and Jacob methods was 9.14×10^{-5}. The aquifer test data indicate that there were no major effects from nearby pumping of surrounding wells and no significant recharge or discharge boundaries experienced;

- Water quality was analyzed during the testing. In general, the water quality results indicate the water produced during the aquifer testing meets TCEQ standards, with the exception of an elevated total dissolved solids and sulfate concentrations in CHL Well No. 1. Field parameter data were collected during the aquifer test, including pH and specific conductance taken at various times during the pumping phase of the aquifer test. The results indicate that the pH and specific conductance slightly changed throughout the pumping phase. No negative impacts to water quality are anticipated with prolonged production from CHL Well No. 1; and,

- As required by the SWTCGCD, the effects of current and projected pumpage on water levels on surrounding wells for a one week, one year, and seven year period were estimated using the Theis equation. Based on the results of the modeling, CHL Well No. 1 continuously pumping at a rate of 5.67 gpm for 1 week, 1 year, and 7 years results in an

estimated 22.21 feet, 26.80 feet, and 29.06 feet, respectively. Based upon the results of the aquifer testing and subsequent modeling, drawdown will likely be experienced in neighboring wells completed within the Lower Trinity Aquifer within a 4-mile radius; however, that drawdown is not expected to have any unreasonable impacts on the aquifer or surrounding wells, springs, or surface water due to the static water level and relatively low pumping volumes.

Section VIII: References

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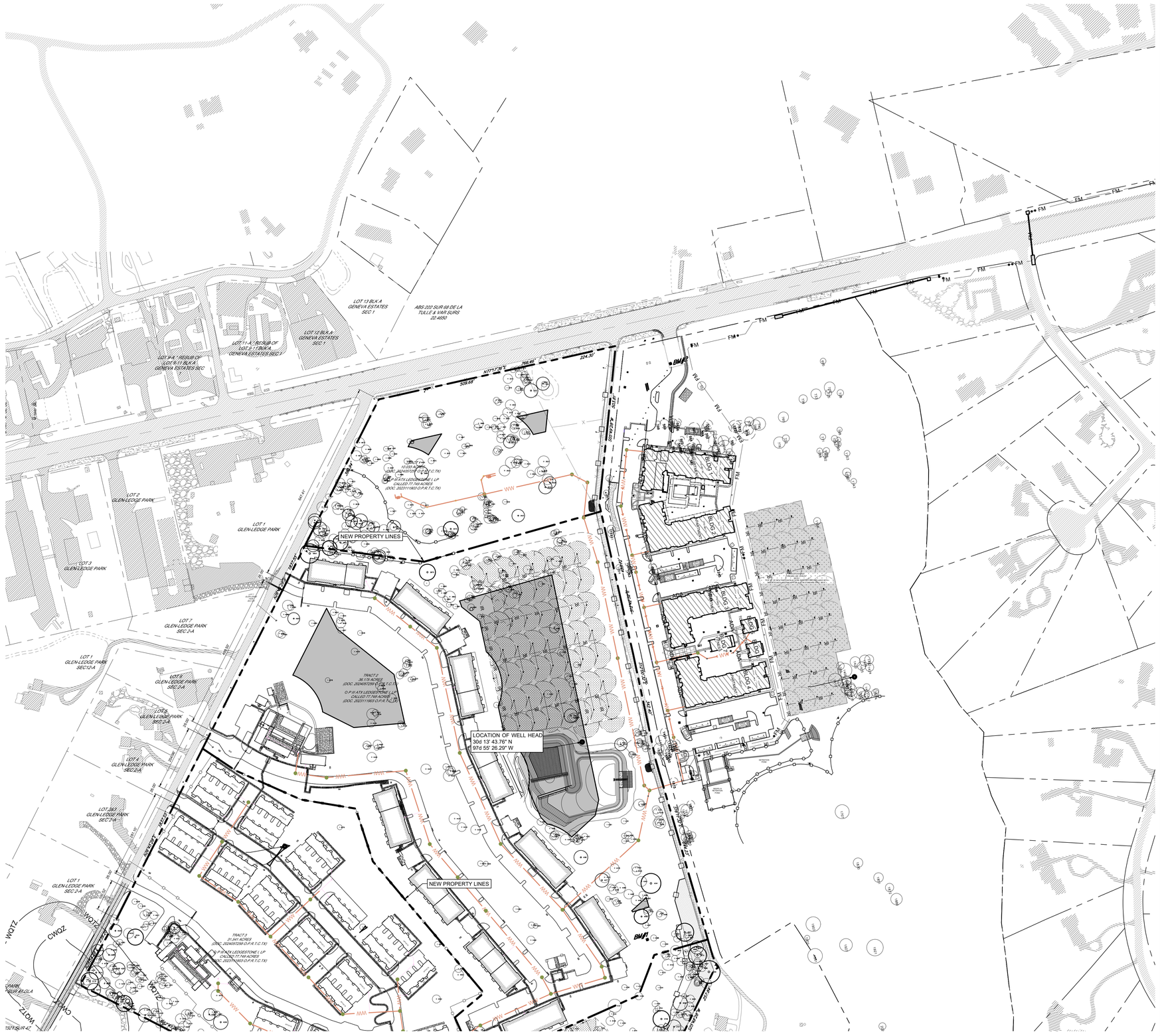
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Appendix A

Detailed Site Plan



150 75 0 150 300

SCALE IN FEET

LEGEND

PROPOSED	EXISTING	
872	872	CONTOUR LINE
		CONCRETE SIDEWALK
		PERVIOUS SIDEWALK
		SIDEWALK RAMP
		HANDICAPPED PARKING SPACE & SIDEWALK RAMP
		CROSSWALK
ST	ST	STORM SEWER LINE
WW	WW	WASTEWATER LINE
		WASTEWATER SERVICE
WL	WL	WATER LINE
		WATER SERVICE
FWL		FIRE LINE
IR		IRRIGATION LINE
		WATER VALVE
		FIRE HYDRANT
	WWMH	WASTEWATER MANHOLE
	SSMH	STORMSEWER MANHOLE
		CURB INLET
		GRATE INLET
		1/2" REBAR FOUND (OR AS NOTED)
		1/2" REBAR WITH CAP FOUND
		1/2" REBAR WITH CHAPARRAL CAP SET
		WATER METER
		UTILITY POLE
	OU	OVERHEAD UTILITIES
		ELEC. UTILITY
		ELEC. MANHOLE
		LIGHT POLE
		TELEPHONE UTILITY
		UNDERGROUND FIBER OPTIC MARKER
		TELEPHONE MANHOLE
		UNDERGROUND GAS MARKER
		CHAIN LINK FENCE

B.M. #1
5/8-INCH IR W / CAP STAMPED "LJA SURVEY"
N,E = 10054574.61, 3057649.53
ELEV. = 1002.54

B.M. #2
MAGNAIL W / SHINER
N,E = 10056393.72, 3057722.58
ELEV. = 981.82

BEARING BASIS:
ALL BEARINGS BASED ON THE TEXAS STATE PLANE COORDINATGE SYSTEM, GRID NORTH, CENTRAL ZONE (4203) NAD83.

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

811 Know what's below. Call before you dig.

LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS

OVERALL PROJECT LAYOUT

9303 & 9601 LEDGESTONE TERRACE, AUSTIN, TX 78737

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 08/08/2024
DESIGNED BY:
DRAWN BY:
CHECKED BY:
DRAWING NAME: A116-1007-PHASE1LOCATIONS.DWG

LJA Engineering, Inc.
7500 Rialto Boulevard
Building II, Suite 100
Austin, Texas 78735
Phone 512.439.4700
Fax 512.439.4716
FRN-F-1386

JOB NUMBER: A116-1007

OPL01

SHEET NO. 1 OF 1 SHEETS

TRAVIS COUNTY TNR No. 22-38855 AUSTIN CASE No. SP-2023-0177D

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Plot Date/Time: Aug 26, 24 - 08:51:40

Appendix B

State Well Reports

STATE OF TEXAS WELL REPORT for Tracking #696105

Owner:	**OP III ATX Ledgestone**	Owner Well #:	**SWTCGCD#58492op2**
Address:	**500 W. 5th , #700 Austin, TX 78701**	Grid #:	**58-49-2**
		Latitude:	**30° 13' 43.7" N**
Well Location:	**9021 W Hwy 290 Austin, TX 78736**	Longitude:	**097° 55' 26.6" W**
Well County:	**Travis**	Elevation:	**991 ft. above sea level**
Type of Work:	**New Well**	Proposed Use:	**Irrigation**

Drilling Start Date: **3/25/2025** Drilling End Date: **4/15/2025**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
10.625	**0**	**10**
8.875	**10**	**950**

Drilling Method: **Air Rotary**

Borehole Completion: **Perforated or Slotted**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**Cement 29**
50	**640**	**Bentonite 74**

Seal Method: **Pressure**

Sealed By: **Driller**

Distance to Property Line (ft.): **1000**

Distance to Septic Field or other concentrated contamination (ft.): **N/A**

Distance to Septic Tank (ft.): **N/A**

Method of Verification: **No Data**

Surface Completion: **Surface Sleeve Installed**

Water Level: **520 ft.** below land surface on **2025-04-16** Measurement Method: **Electric Line**

Packers: **Rubber at 640 ft.**
Rubber at 643 ft.
Rubber at 647 ft.
Rubber at 650 ft.

Type of Pump: **Submersible** Pump Depth (ft.): **840**

Well Tests: **Jetted** **Yield: 40+ GPM**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Bee Cave Drilling, Inc.**

185 Angel Fire Rd.
Dripping Springs, TX 78620

Driller Name: **Michael Scott** License Number: **59719**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**10**	**tan limestone**
10	**45**	**grey limestone**
45	**180**	**grey limestone**
180	**260**	**grey limestone / shale mix**
260	**520**	**grey limestone**
520	**600**	**grey limestone**
600	**660**	**grey clay**
660	**770**	**grey sandstone**
770	**820**	**tan sandstone**
820	**900**	**red sandstone**
900	**950**	**tan sandstone**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
5.5	**Blank**	**New Steel**		**-3**	**750**
5.5	**Perforated or Slotted**	**New Steel**		**750**	**940**
5.5	**Blank**	**New Steel**		**940**	**950**

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Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-50-120

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5850120
County	Travis
River Basin	Colorado
Groundwater Management Area	9
Regional Water Planning Area	K - Lower Colorado
Groundwater Conservation District	Southwestern Travis County GCD
Latitude (decimal degrees)	30.235
Latitude (degrees minutes seconds)	30° 14' 06" N
Longitude (decimal degrees)	-97.8730556
Longitude (degrees minutes seconds)	097° 52' 23" W
Coordinate Source	Global Positioning System - GPS
Aquifer Code	217HSTN - Hosston Formation
Aquifer	Trinity
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	832
Land Surface Elevation Method	Interpolated From Topo Map
Well Depth (feet below land surface)	855
Well Depth Source	Driller's Log
Drilling Start Date	
Drilling End Date	11/10/1984
Drilling Method	Mud (Hydraulic) Rotary
Borehole Completion	Open Hole

Well Type	Observation
Well Use	Unused
Water Level Observation	TWDB Water Data for Texas
Water Quality Available	No
Pump	None
Pump Depth (feet below land surface)	
Power Type	
Annular Seal Method	Halliburton
Surface Completion	Surface Slab Installed
Owner	H.E. Butt
Driller	Central Texas Drilling
Other Data Available	Aquifer Test; Drillers Log; Gamma Ray; Neutron
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	
Other Well Number	
Previous State Well Number	
Reporting Agency	Texas Water Development Board
Created Date	3/13/2003
Last Update Date	3/4/2020

Remarks	Estimated yield 60-80 GPM in 1984. Observation well for aquifer test of Freescale wells in 2004. Test data in TWDB files.

Casing

Diameter (in.)	Casing Type	Casing Material	Schedule	Gauge	Top Depth (ft.)	Bottom Depth (ft.)
9	Blank	Steel			0	760
8	Open Hole				760	855

Well Tests - No Data

Lithology

Top Depth (ft.)	Bottom Depth (ft.)	Description
0	4	Top Soil
4	18	Gravel
18	175	Blue Lime
175	300	Gray Lime
300	320	Brown Lime
320	500	Gray Lime
500	540	White Lime
540	680	Dark Brown Lime
680	710	Hammett Shale
710	780	Brown Lime
780	790	Trinty Blue Sand
790	855	Trinity & Red Beds

Annular Seal Range

Annular Seal Material	Amount	Unit	Top Depth (ft.)	Bottom Depth (ft.)
Cement		Unknown	0	760

Borehole

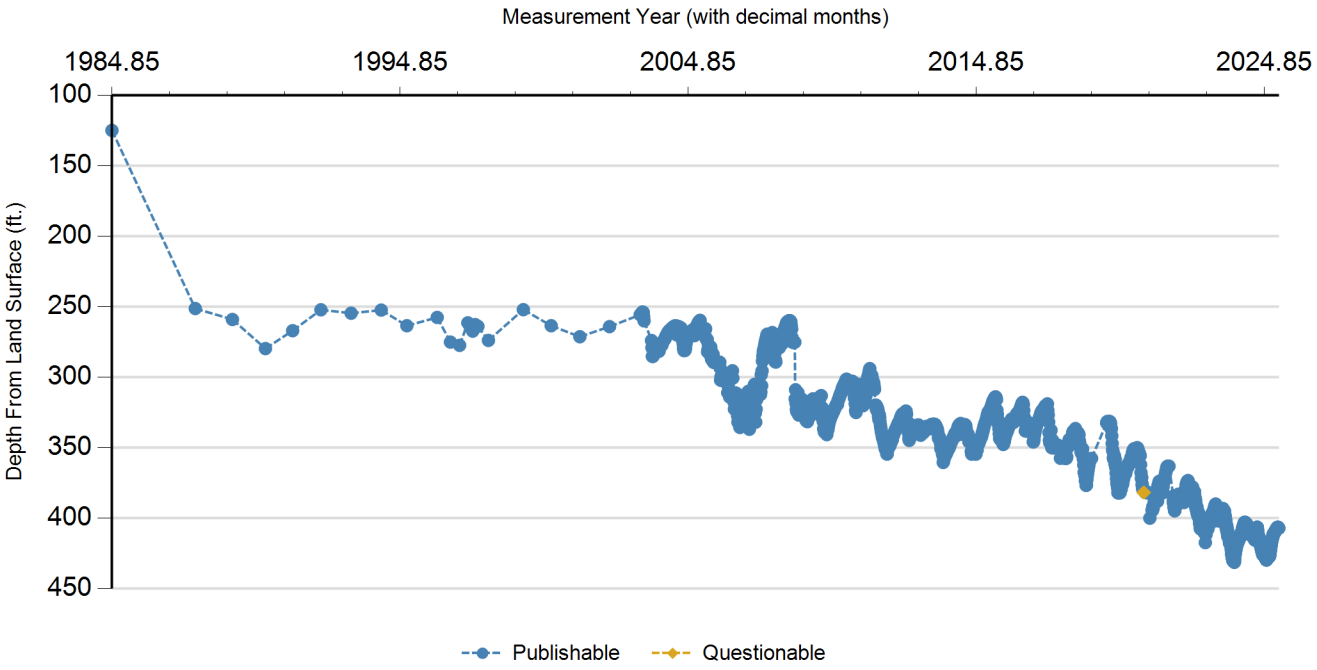
Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
12	0	755
8	755	855

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements



Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	11/10/1984		125		707	1	Registered Water Well Driller	Unknown		
P	10/1/1987		251.3	126.30	580.7	2	Texas Water Development Board	Steel Tape		
P	1/11/1989		259.05	7.75	572.95	1	Texas Water Development Board	Steel Tape		
P	3/4/1990		279.7	20.65	552.3	1	Texas Water Development Board	Steel Tape		
P	2/14/1991		267	(12.70)	565	1	Texas Water Development Board	Steel Tape		
P	2/7/1992		252.2	(14.80)	579.8	1	Texas Water Development Board	Steel Tape		
P	2/25/1993		254.6	2.40	577.4	1	Texas Water Development Board	Steel Tape		
P	3/11/1994		252.4	(2.20)	579.6	1	Texas Water Development Board	Steel Tape		
P	1/31/1995		263.5	11.10	568.5	1	Texas Water Development Board	Steel Tape		
P	2/20/1996		257.6	(5.90)	574.4	1	Texas Water Development Board	Steel Tape		
P	8/8/1996		275.11	17.51	556.89	1	Texas Water Development Board	Steel Tape		
P	12/4/1996		277.4	2.29	554.6	1	Texas Water Development Board	Steel Tape		
P	3/13/1997		261.45	(15.95)	570.55	1	Texas Water Development Board	Steel Tape		
P	4/16/1997		264.7	3.25	567.3	1	Texas Water Development Board	Electric Line		
P	5/15/1997		267.32	2.62	564.68	1	Texas Water Development Board	Steel Tape		
P	6/18/1997		262.7	(4.62)	569.3	1	Texas Water Development Board	Steel Tape		
P	7/21/1997		263.9	1.20	568.1	1	Texas Water Development Board	Steel Tape		
P	12/4/1997		273.9	10.00	558.1	1	Texas Water Development Board	Steel Tape		
P	2/16/1999		252.1	(21.80)	579.9	1	Texas Water Development Board	Steel Tape		
P	2/4/2000		263.5	11.40	568.5	1	Texas Water Development Board	Steel Tape		
P	2/2/2001		271.3	7.80	560.7	1	Texas Water Development Board	Steel Tape		

Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 58-50-120

Water Quality Analysis - No Data Available

GWDB DISCLAIMER: Except where noted, all of the information provided in the Texas Water Development Board (TWDB) Groundwater Database (https://www.twdb.texas.gov/groundwater/data/gwdbrpt.asp) is believed to be accurate and reliable; however, the TWDB assumes no responsibility for any errors appearing in rules or otherwise. Further, TWDB assumes no responsibility for the use of the information provided. PLEASE NOTE that users of these data are responsible for checking the accuracy, completeness, currency and/or suitability of all information themselves. TWDB makes no guarantees or warranties as to the accuracy, completeness, currency, or suitability of the information provided via the Groundwater Database (GWDB). TWDB specifically disclaims any and all liability for any claims or damages that may result from providing GWDB data or the information it contains. For additional information or answers to questions concerning the TWDB GWDB, contact the Groundwater Data Team at GroundwaterData@twdb.texas.gov.

STATE OF TEXAS WELL REPORT for Tracking #696101

Owner:	**OP III ATX Ledgestone**	Owner Well #:	**SWTCGCD#584920pl**
Address:	**500 W. 5th St, # 700 Austin, TX 78701**	Grid #:	**58-49-2**
		Latitude:	**30° 13' 45.2" N**
Well Location:	**8921 W Hwy 290 Austin, TX 78736**	Longitude:	**097° 55' 17.2" W**
Well County:	**Travis**	Elevation:	**971 ft. above sea level**
Type of Work:	**New Well**	Proposed Use:	**Irrigation**

Drilling Start Date: **3/24/2025** Drilling End Date: **4/7/2025**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
10.625	**0**	**10**
8.875	**10**	**920**

Drilling Method: **Air Rotary**

Borehole Completion: **Perforated or Slotted**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**Cement 37**
50	**630**	**Bentonite 65**

Seal Method: **Pressure**

Sealed By: **Driller**

Distance to Property Line (ft.): **200**

Distance to Septic Field or other concentrated contamination (ft.): **n/a**

Distance to Septic Tank (ft.): **n/a**

Method of Verification: **No Data**

Surface Completion: **Surface Sleeve Installed**

Water Level: **443 ft.** below land surface on **2025-04-15** Measurement Method: **Electric Line**

Packers: **Rubber at 630 ft.**
Rubber at 633 ft.
Rubber at 637 ft.
Rubber at 640 ft.

Type of Pump: **Submersible** Pump Depth (ft.): **800**

Well Tests: **Jetted** **Yield: 40+ GPM**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Bee Cave Drilling, Inc.**

185 Angel Fire Rd.
Dripping Springs, TX 78620

Driller Name: **Michael Scott** License Number: **59719**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**5**	**topsoil**
5	**10**	**tan limestone**
10	**20**	**tan limestone / clay**
20	**560**	**grey limestone**
560	**640**	**grey clay**
640	**680**	**grey limestone**
680	**720**	**grey/ tan limestone**
720	**820**	**red/tan sandstone**
820	**920**	**red / grey sandstone mix**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
5.5	**Blank**	**New Steel**		**-3**	**720**
5.5	**Perforated or Slotted**	**New Steel**		**720**	**910**
5.5	**Blank**	**New Steel**		**910**	**920**

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Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #696109

Owner:	**OP III ATX Ledgestone**	Owner Well #:	**SWTCGCD#58492op3**
Address:	**500 W. 5th St, #700 Austin, TX 78701**	Grid #:	**58-49-2**
		Latitude:	**30° 13' 40.8" N**
Well Location:	**9021 W Hwy 290 Austin, TX 78736**	Longitude:	**097° 55' 36.7" W**
Well County:	**Travis**	Elevation:	**1052 ft. above sea level**
Type of Work:	**New Well**	Proposed Use:	**Irrigation**

Drilling Start Date: **3/26/2025** Drilling End Date: **4/11/2025**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
10.625	**0**	**10**
8.875	**10**	**1000**

Drilling Method: **Air Rotary**

Borehole Completion: **Perforated or Slotted**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**Cement 50**
50	**693**	**Bentonite 91**

Seal Method: **Pressure**

Sealed By: **Driller**

Distance to Property Line (ft.): **400**

Distance to Septic Field or other concentrated contamination (ft.): **n/a**

Distance to Septic Tank (ft.): **n/a**

Method of Verification: **No Data**

Surface Completion: **Surface Sleeve Installed**

Water Level: **No Data**

Packers: **Rubber at 693 ft.**
Rubber at 695 ft.
Rubber at 697 ft.
Rubber at 700 ft.

Type of Pump: **Submersible**

Pump Depth (ft.): **860**

Well Tests: **Jetted** **Yield: 40+ GPM**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Bee Cave Drilling, Inc.**

185 Angel Fire Rd.
Dripping Springs, TX 78620

Driller Name: **Michael Scott** License Number: **59719**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**5**	**tan limestone**
5	**500**	**grey limestone**
500	**520**	**grey limestone shale stringers**
520	**660**	**grey limestone**
660	**690**	**grey limestone/ clay**
690	**840**	**tan / red sandstone**
840	**900**	**grey sandstone**
900	**960**	**grey /tan sandstone and gravel**
960	**1000**	**gravel mix**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
5.5	**Blank**	**New Steel**		**-3**	**800**
5.5	**Perforated or Slotted**	**New Steel**		**800**	**990**
5.5	**Blank**	**New Steel**		**990**	**1000**

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Appendix C

Geophysical Logs

Citizen House Ledgestone Well 1

PO Box 572 Dripping Springs, Texas 78620

512-798-1888

www.well-scope.com

Project

Project:	Citizen House Ledgestone	Section ID:	Well 1
Area:	Lone Star Drilling	Type:	Inspection Vertical w/
Rig:	Lone Star Drilling	County:	Travis
Location Lat:	30.234763	State:	TX
Location Lon:	-97.804139	Country:	USA

Borehole Data

Contractor:	New Care Drilling	Driller TD:	950'
Driller:	Lone Star	Logger TD:	950'
Driller:	Lone Star	Depth Ref:	Ground Level
Drill Method:	Air Rotary	Depth Level:	450'
Fluid Type:	Air	Hole Diameter:	9.5in
		Hole Diameter:	6.75in

Bit Record

Run #	Bit Size	From (ft)	To (ft)
1	9.5"	450	950

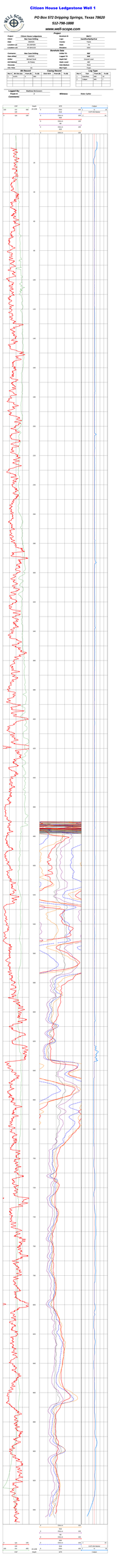
Casing Record

Area Ref.	From (ft)	To (ft)

Log Type

Run #	Tool	From (ft)	To (ft)
1	Caliper	450	950
1	Caliper	450	0

Logged By: Matthew McGovern
Field Eng: Matthew McGovern
Witness: Mario Sylter
Comments:



Citizen House 290 Well 1

PO Box 572 Dripping Springs, Texas 78620

512-798-1888

www.well-scope.com

Project	
Project	Citizen House 290
Client	Rex Cave Drilling
API	42303535
Latitude Lat	30.2011000
Longitude Lon	-97.8514000

Contractor	Rex Cave Drilling
Date drilled	3/19/2021
Driller	Wes Scott
Logged by	Ian Parker
Records	1
Elev Time	Ground

Borehole ID	Well 1
Logic	BaseRockyTopFull
County	Travis
State	TX
Elevation	1014

Borehole Data	
Logged TD	800
Logged TD	814
Depth Ref	Ground Level
Hole Diameter	8.5
Hole Number	Straight
Well Type	Potable

Bit Record

No	#	Bit Size	From (ft)	To (ft)
1		8.875	0	800

Casing Record

Size	#	Grade	From (ft)	To (ft)

Casing Type

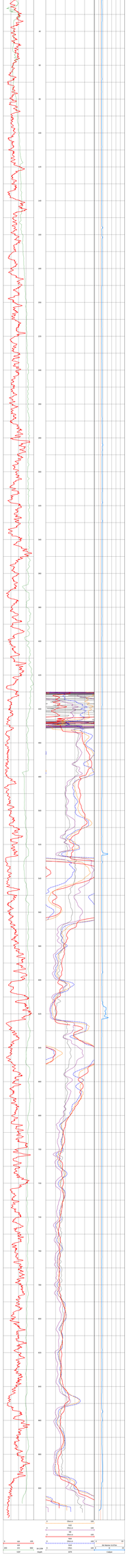
Size	#	Type	From (ft)	To (ft)
1		Open Hole	0.00	814
2		Casing	0.00	0

Logged By: Matthew McGovern

Depth Ref: 0

Witness: Mike Scott

Comments:


UDP
Depth
GR/ER
Caliper
Mud
Delta-S
Delta-D
Mud
Delta-S
Delta-D
Mud
Delta-S
Delta-D

Ledgestone Townhomes Well 1

PO Box 572 Dripping Springs, Texas 78620

512-798-1888

www.well-scope.com

Project

Customer	Ledgestone Townhomes	Project ID	Well 1
Client	Ken Cook Drilling	Field	Gamma Ray Spiral Log
Location	4/2/2022	Area	Texas
Job Started	4/2/2022	County	Hays
Location Lat	30.1858422	Elevation	1610

Borehole

Contractor	Ken Cook Drilling	Depth TD	1000
Date drilled	4/2/2022	Logged TD	1000
Hole Size	7.875 in	Logged Int	10 ft per reading
Drill Method	Air Rotary	Water Level	Dry
Direction		Mud Medium	Fluid
Dev. Type	n/a	Mud Type	Air

Bit Record

Run #	Bit Size (in)	From (ft)	To (ft)	Bore Vol/ft	From (ft)	To (ft)

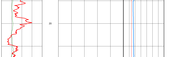
Casing Record

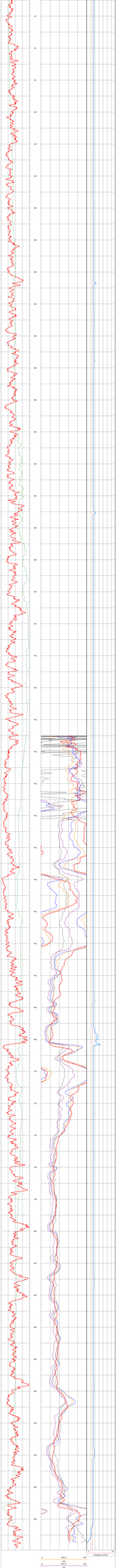
Run #	Size	From (ft)	To (ft)
1	Surface	0	100
2	Casing	100	0

Logged By: Matthew McGovern

Witness: Michael Scott

Comments





GEO CAM

Borehole: HEB MW 5120

Logs: GAMMA, RESISITIVITY

Water Well Logging & Video Recording Services

Geo Cam, Inc. 126 Palo Duro, San Antonio, TX 210-495-9121

Project: HEB MW 5120 Date: 01-10-12

Client: **BARTON SPRINGS WCD** County: TRAVIS

Location: **N30* 14' 06.10" W97* 52' 23.47"** State: TX

BOREHOLE DATA

Drilling Contractor: CENTRAL TEXAS DRILLING **Driller T.D. (ft) : 850'**

Elevation: 850' GPS Logger T.D. (ft) : 850'

Depth Ref: G.L. Date Drilled: NA

BIT RECORD				CASING RECORD		
RUN	BIT SIZE (in)	FROM (ft)	TO (ft)	SIZE/WGT/THK	FROM (ft)	TO (ft)
1	NA			8" STEEL	+3'	750'
2						
3						

Drill Method: NA Weight: **Fluid Level (ft) :** 340'

Hole Medium: Mud Type: Time Since Circ:

Viscosity: Rm: at: Deg C

GENERAL DATA

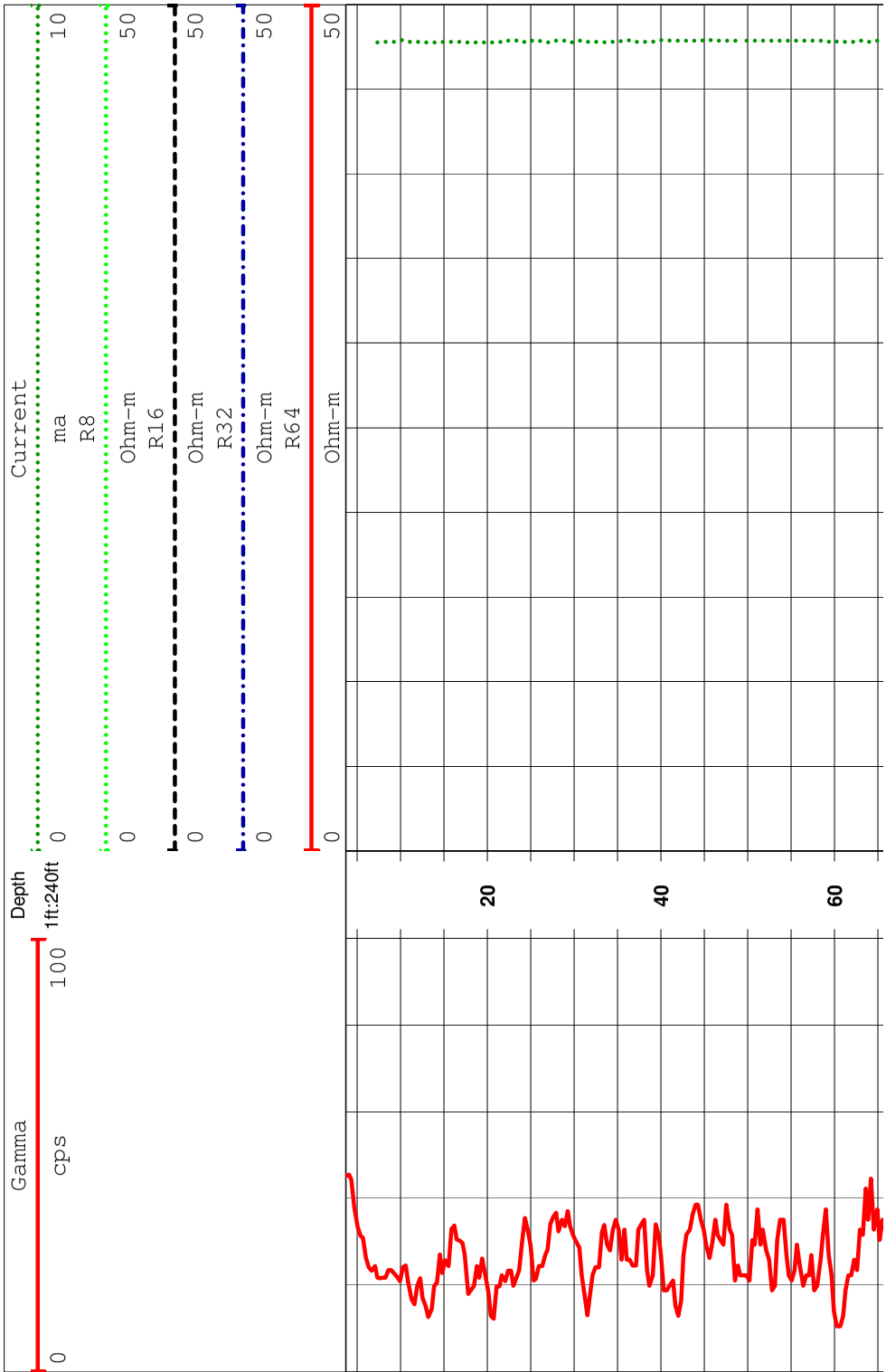
Logged by: Robert C. Becknal Unit/Truck: 03

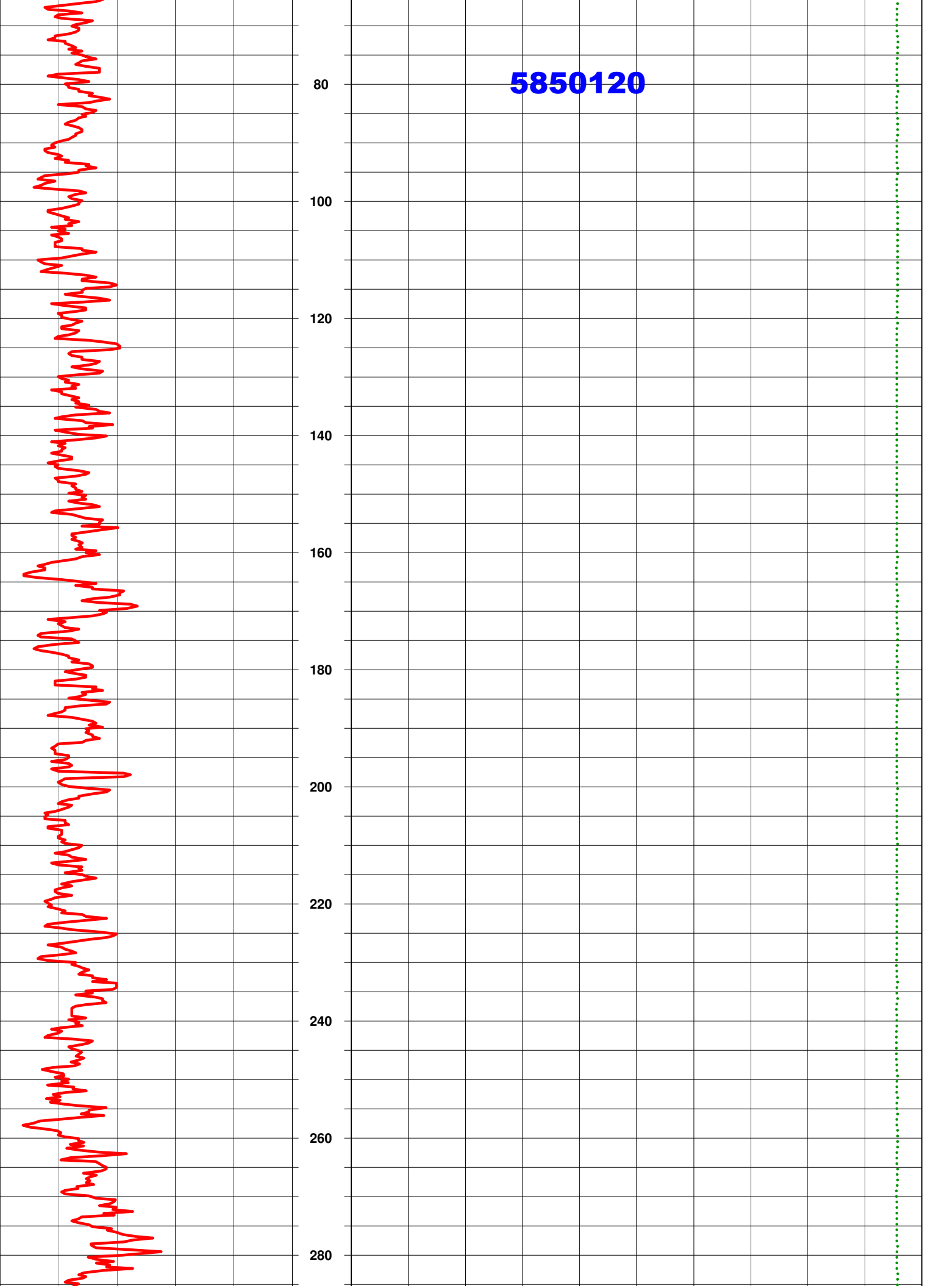
Witness:

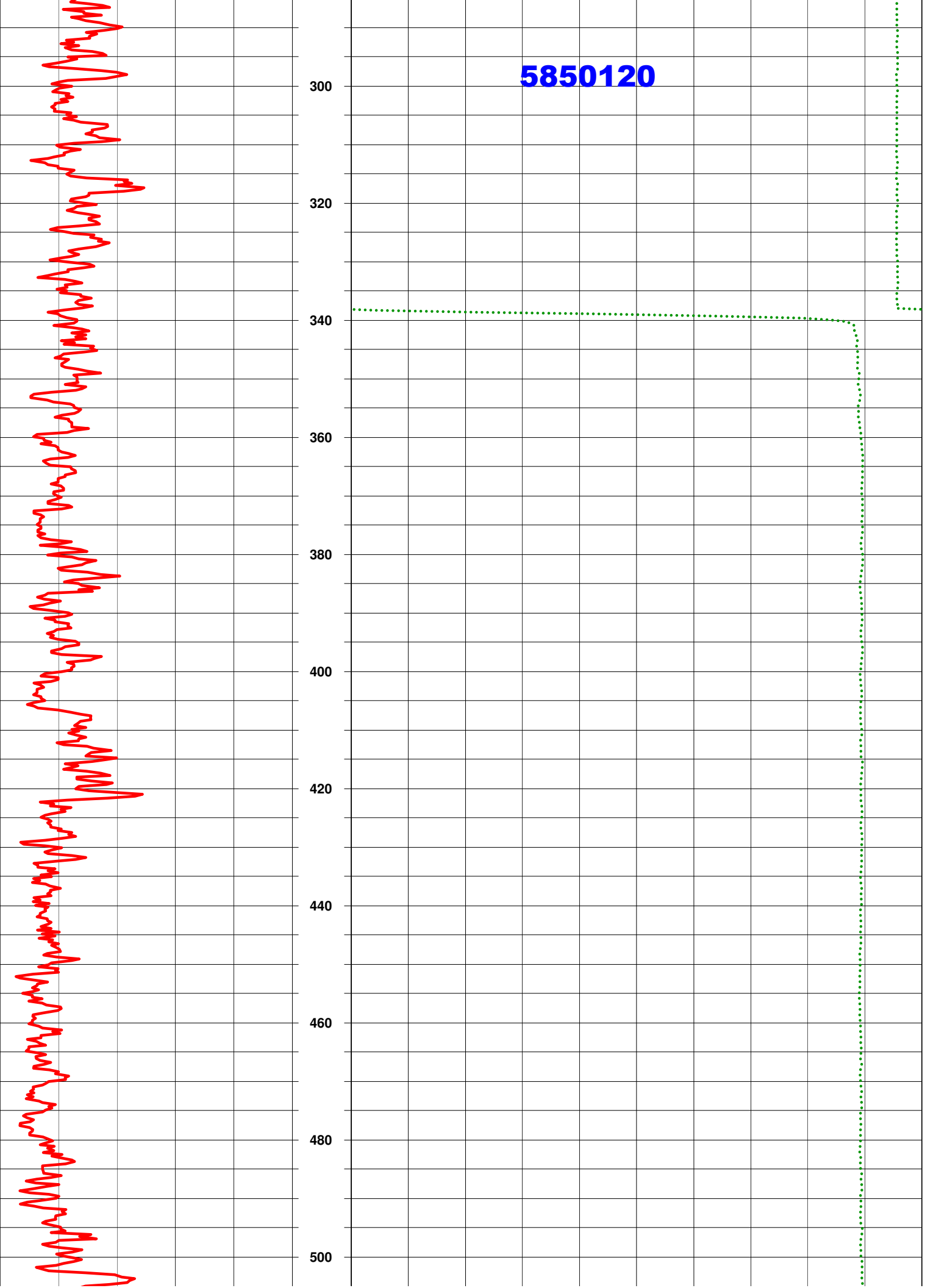
LOG TYPE	RUN NO	SPEED (ft/min)	FROM (ft)	TO (ft)	FT./ IN.
GAMMA	2	30	847'	4'	20
RESISTIVITY	2	30	850'	755'	20

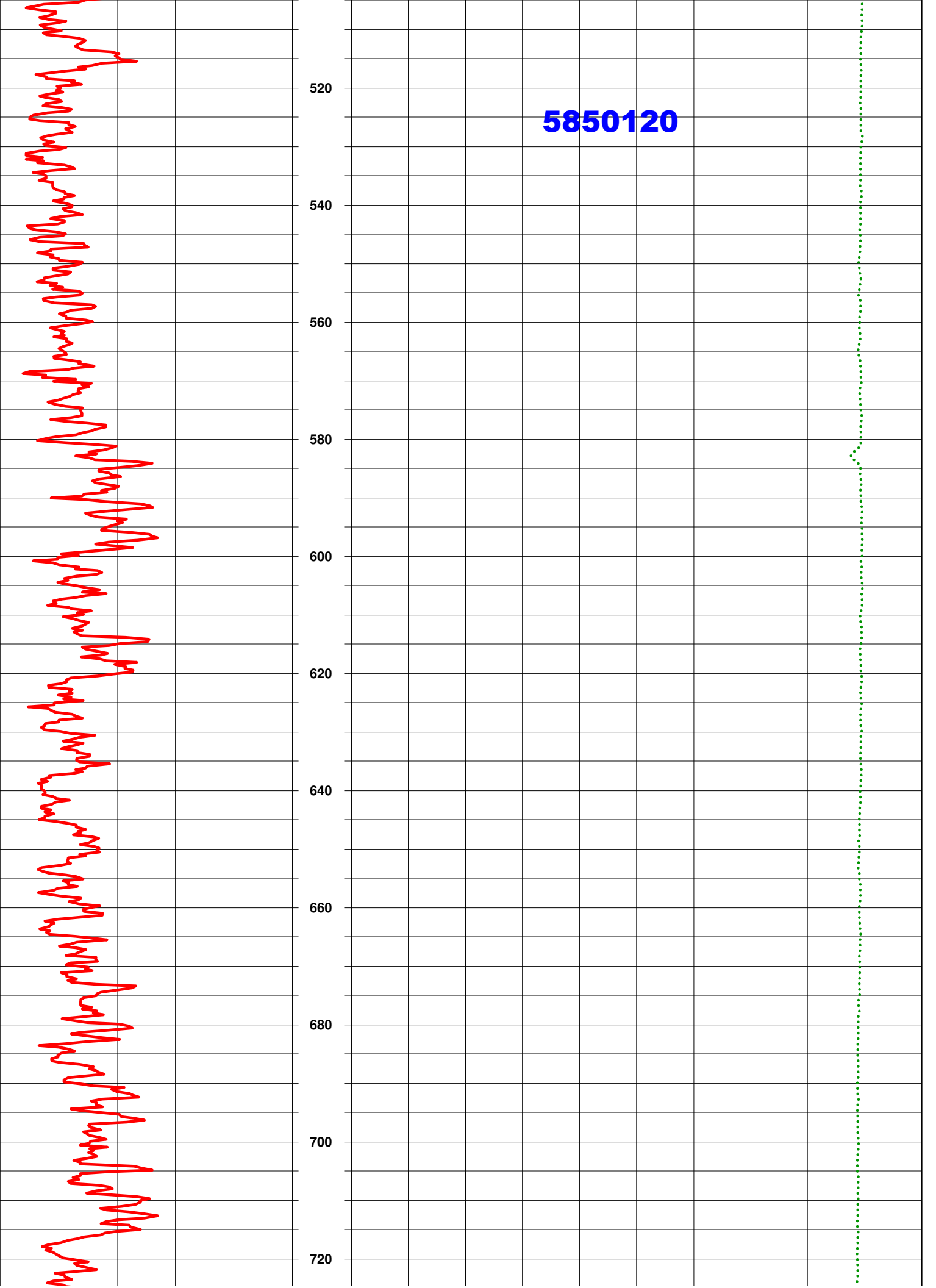
Comments:

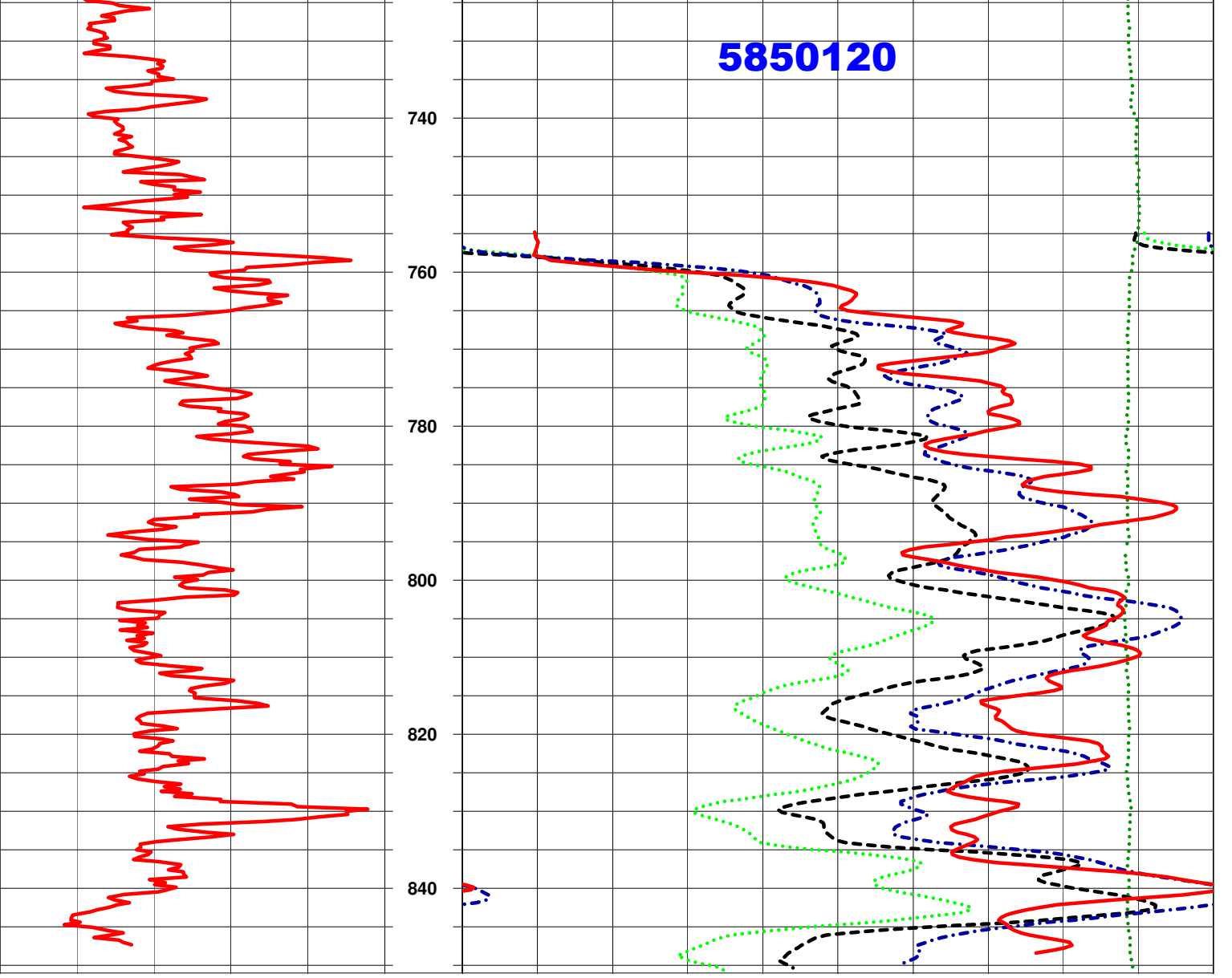
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GEO CAM

Borehole: 11505 SW OAKS

Logs: GAMMA

Water Well Logging & Video Recording Services

Geo Cam, Inc. 126 Palo Duro, San Antonio, TX 210-495-9121

Project: 11505 SW OAKS
Client: **BARTON SPRINGS WCD**
Location: **N30* 13' 09.15" W97* 58' 39.96"**

Date: 08-26-11
County: TRAVIS
State: TX

BOREHOLE DATA

Drilling Contractor: NA
Elevation: 850' GPS
Depth Ref: G.L.

Driller T.D. (ft) : NA
Logger T.D. (ft) : 782'
Date Drilled: NA

BIT RECORD				CASING RECORD		
RUN	BIT SIZE (in)	FROM (ft)	TO (ft)	SIZE/WGT/THK	FROM (ft)	TO (ft)
1	NA			4 1/2" PVC	+1.6'	TD
2						
3						

Drill Method: NA
Hole Medium:
Viscosity:

Weight:
Mud Type:
Rm: at: Deg C

Fluid Level (ft) : 521'
Time Since Circ:

GENERAL DATA

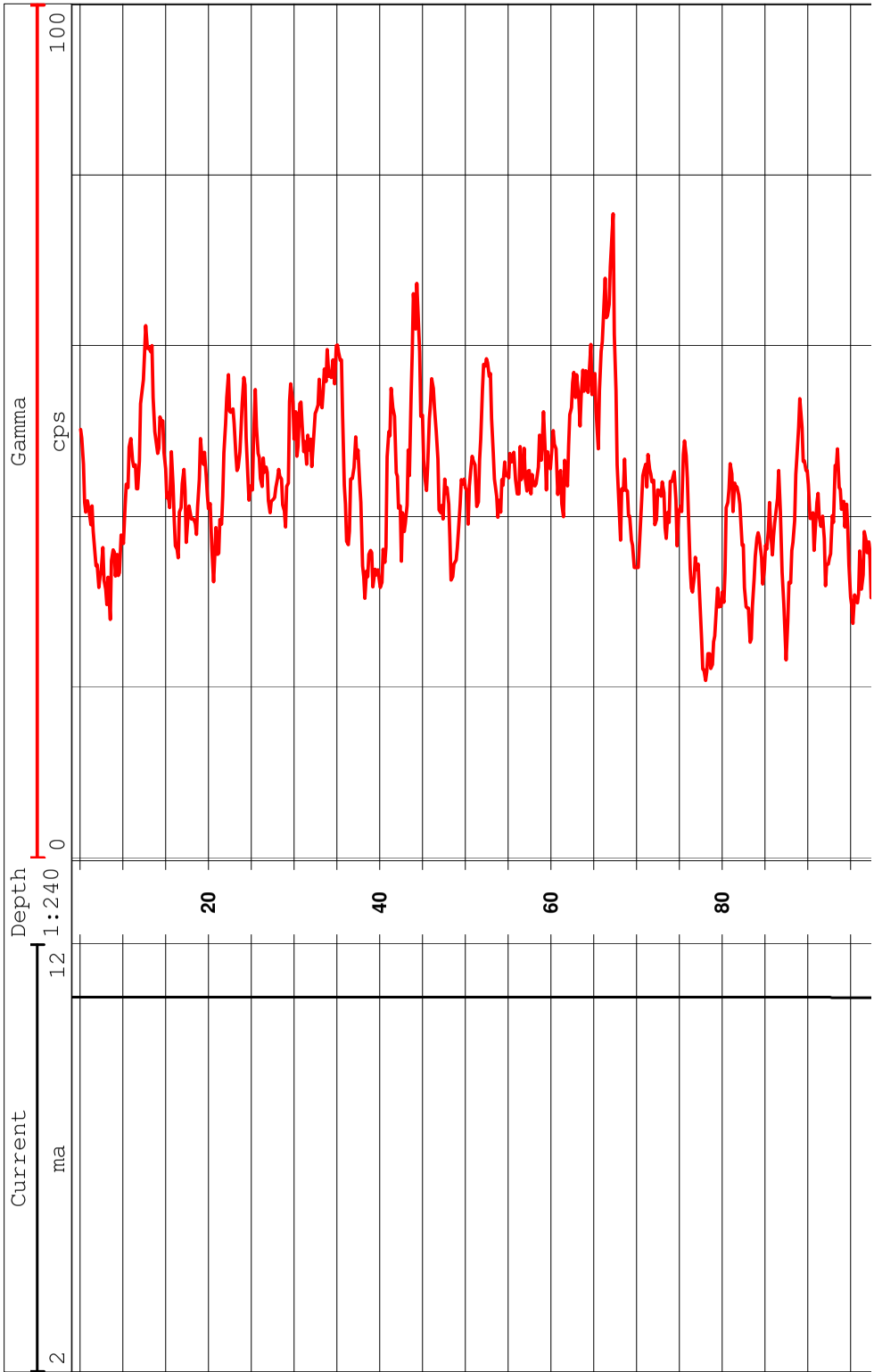
Logged by: Robert C. Becknal
Witness:

Unit/Truck: 03

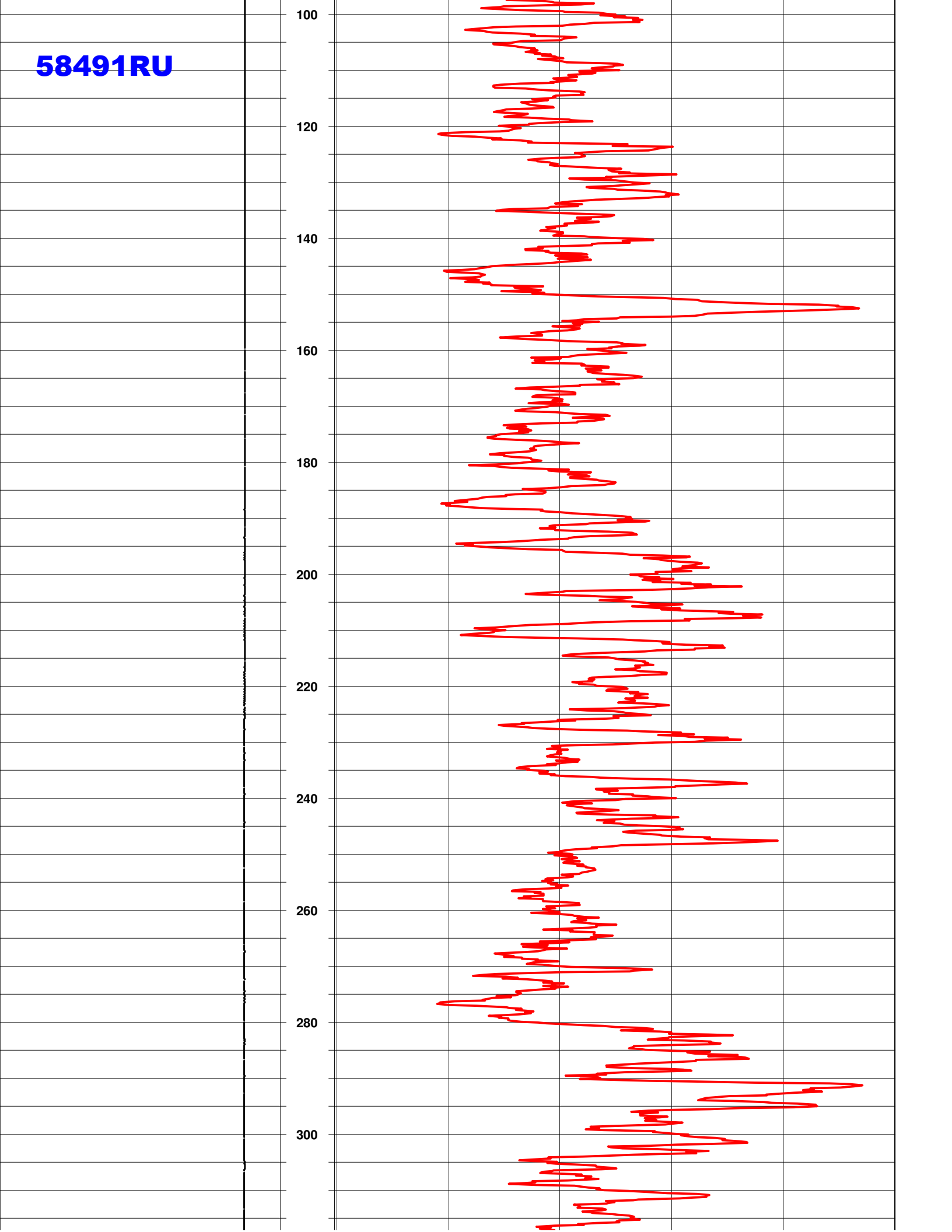
LOG TYPE	RUN NO	SPEED (ft/min)	FROM (ft)	TO (ft)	FT./ IN.
GAMMA	2	22	782'	5'	20

Comments:

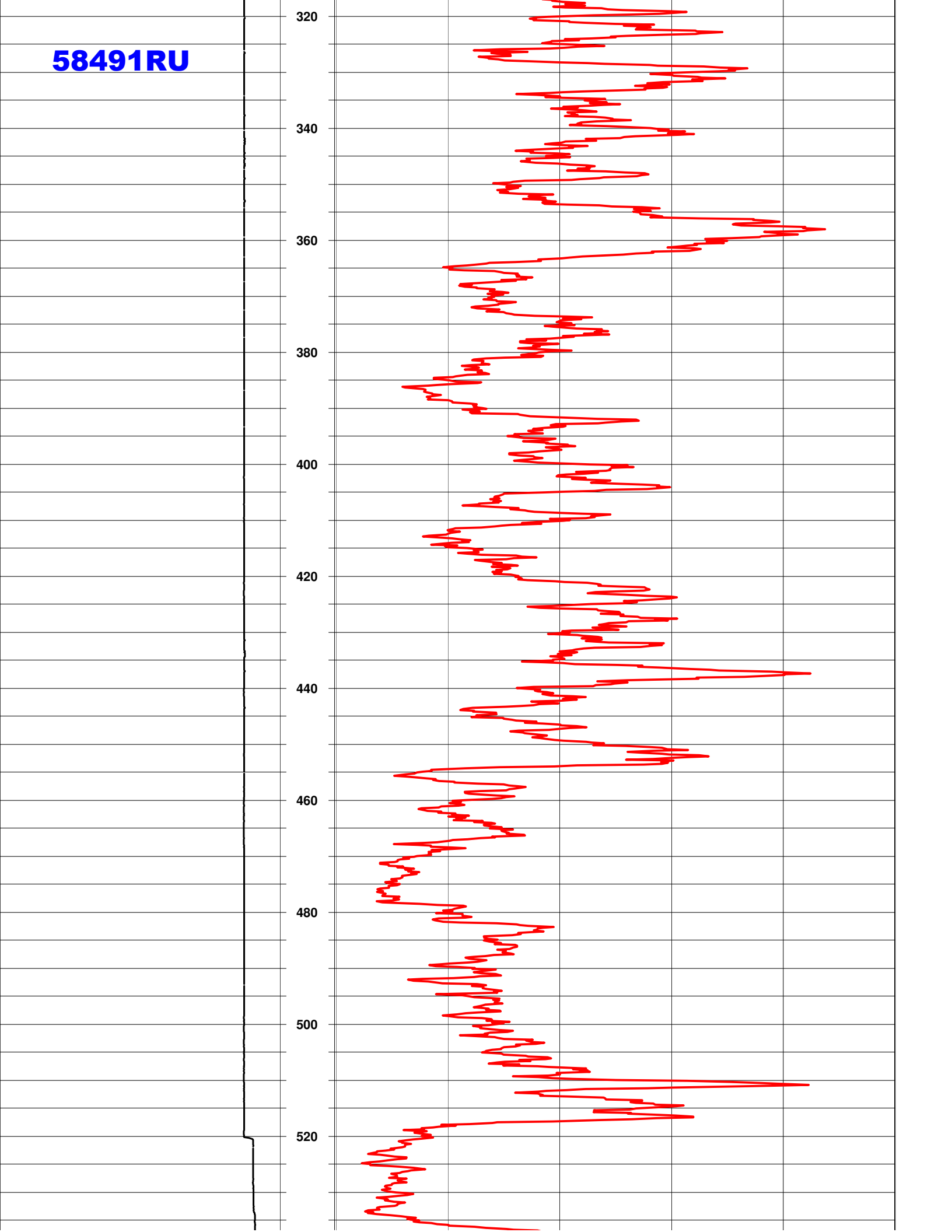
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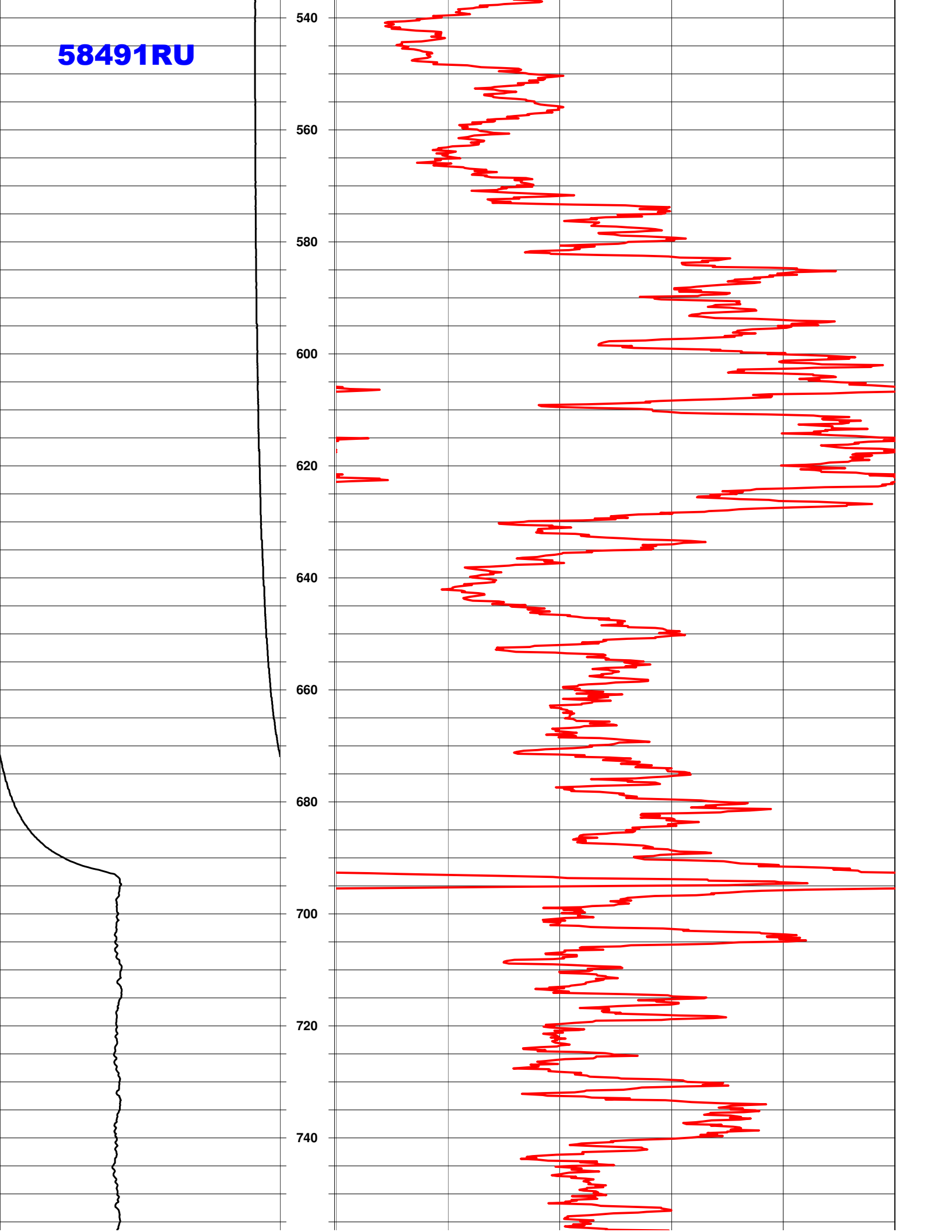


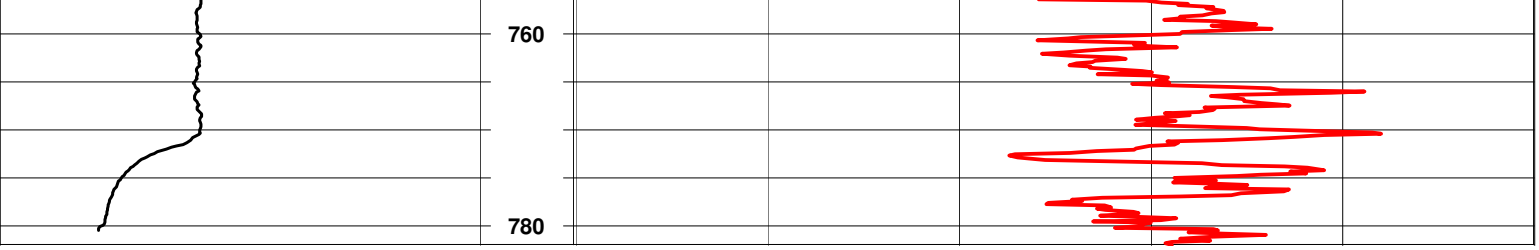
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Appendix D

Aquifer Test Analyses

Citizen House Ledgestone Well No. 1 - Aquifer Test (May 6, 2025)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW CHL Well No. 1 Temperature (F)	PW CHL Well No. 1 Water Level (ft bgs)	PW CHL Well No. 1 Water Level (ft MSL)	PW CHL Well No. 1 Drawdown (ft)	PW CHL Well No. 1 Pump Rate (gpm)	PW CHL Well No. 1 Specific Capacity (gpm/ft)	Comments	OW CH 290 Well No. 1 Water Level (ft MSL)	OW CH 290 Well No. 1 Drawdown (ft)	OW LT Well No. 1 Water Level (ft MSL)	OW LT Well No. 1 Drawdown (ft)
5/6/25 11:58 AM	0		78.46	523.61	479.39	0.00			Pump Start	470.51	0.00	478.17	0.00
5/6/25 11:59 AM	1		78.46	549.35	453.65	25.74	38.0	1.48		470.47	0.04	478.21	-0.04
5/6/25 12:00 PM	2		78.46	573.07	429.93	49.46	33.0	0.67		470.50	0.01	478.09	0.08
5/6/25 12:01 PM	3		78.44	587.40	415.60	63.79	36.0	0.56		470.52	-0.01	478.20	-0.03
5/6/25 12:02 PM	4		78.43	596.72	406.28	73.11	34.0	0.47		470.49	0.02	478.12	0.05
5/6/25 12:03 PM	5		78.40	602.99	400.01	79.37				470.56	-0.05	478.14	0.03
5/6/25 12:04 PM	6		78.35	577.81	425.19	54.19	0.0		Temporary Pump Stop	470.53	-0.02	478.12	0.05
5/6/25 12:05 PM	7		78.32	560.80	442.20	37.18	0.0		Generator Malfunction	470.49	0.03	478.21	-0.04
5/6/25 12:06 PM	8		78.29	550.26	452.74	26.64	0.0			470.54	-0.03	478.13	0.03
5/6/25 12:07 PM	9		78.26	551.10	451.90	27.48	0.0			470.58	-0.06	478.08	0.09
5/6/25 12:08 PM	10		78.25	576.60	426.40	52.98	35.0	0.66	Pump Start	470.51	0.00	478.17	0.00
5/6/25 12:09 PM	11		78.24	591.45	411.55	67.83	33.0	0.49		470.53	-0.01	478.05	0.12
5/6/25 12:10 PM	12		78.22	600.78	402.22	77.16	34.0	0.44		470.54	-0.02	478.17	0.00
5/6/25 12:11 PM	13		78.21	606.99	396.01	83.38	33.0	0.40		470.50	0.01	478.17	0.00
5/6/25 12:12 PM	14		78.19	611.27	391.73	87.66	33.0	0.38		470.52	-0.01	478.17	0.00
5/6/25 12:13 PM	15		78.18	614.49	388.51	90.87	32.5	0.36		470.51	0.00	478.17	0.00
5/6/25 12:18 PM	20		78.12	622.38	380.62	98.77	33.0	0.33		470.42	0.09	478.23	-0.06
5/6/25 12:23 PM	25		78.06	625.97	377.03	102.35	32.5	0.32		470.42	0.10	478.11	0.05
5/6/25 12:28 PM	30		78.05	628.31	374.69	104.69	32.5	0.31		470.44	0.07	478.17	0.00
5/6/25 12:43 PM	45		78.11	632.51	370.49	108.90	32.5	0.30		470.31	0.20	478.14	0.03
5/6/25 12:58 PM	60		78.11	635.01	367.99	111.40	32.5	0.29		470.21	0.31	478.10	0.06
5/6/25 1:13 PM	75		78.14	636.80	366.20	113.19	32.5	0.29		470.13	0.38	478.13	0.04
5/6/25 1:28 PM	90		78.19	638.17	364.83	114.56	32.0	0.28		470.05	0.47	478.04	0.13
5/6/25 1:43 PM	105		78.21	639.29	363.71	115.68	32.0	0.28		469.90	0.61	477.98	0.19
5/6/25 1:58 PM	120		78.24	640.27	362.73	116.66	32.0	0.27		469.87	0.64	478.04	0.13
5/6/25 2:28 PM	150		78.23	641.84	361.16	118.22	32.0	0.27		469.76	0.76	477.93	0.24
5/6/25 2:58 PM	180		78.21	643.06	359.94	119.45	32.0	0.27		469.45	1.07	477.83	0.34
5/6/25 3:28 PM	210		78.14	644.14	358.86	120.53				469.38	1.13	477.70	0.46
5/6/25 3:58 PM	240		78.14	644.97	358.04	121.35				469.20	1.31	477.64	0.53
5/6/25 4:58 PM	300		78.16	646.35	356.65	122.74				468.91	1.60	477.41	0.76
5/6/25 5:58 PM	360		78.17	647.45	355.55	123.84	32.0	0.26	1.65	468.73	1.79	477.16	1.01
5/6/25 6:58 PM	420		78.19	648.42	354.58	124.81				468.52	1.99	477.01	1.16
5/6/25 7:58 PM	480		78.18	649.16	353.84	125.55				468.29	2.22	476.77	1.40
5/6/25 8:58 PM	540		78.20	649.77	353.23	126.16				468.07	2.45	476.57	1.60
5/6/25 9:58 PM	600		78.25	650.51	352.50	126.89				467.86	2.65	476.46	1.71

Note: bgs = below ground surface Column Pipe Diameter = 1 1/2 inches Horsepower = 7.5 HP
MSL = Mean Sea Level Pump Setting = 840 ft

Citizen House Ledgestone Well No. 1 - Aquifer Test (May 6, 2025)

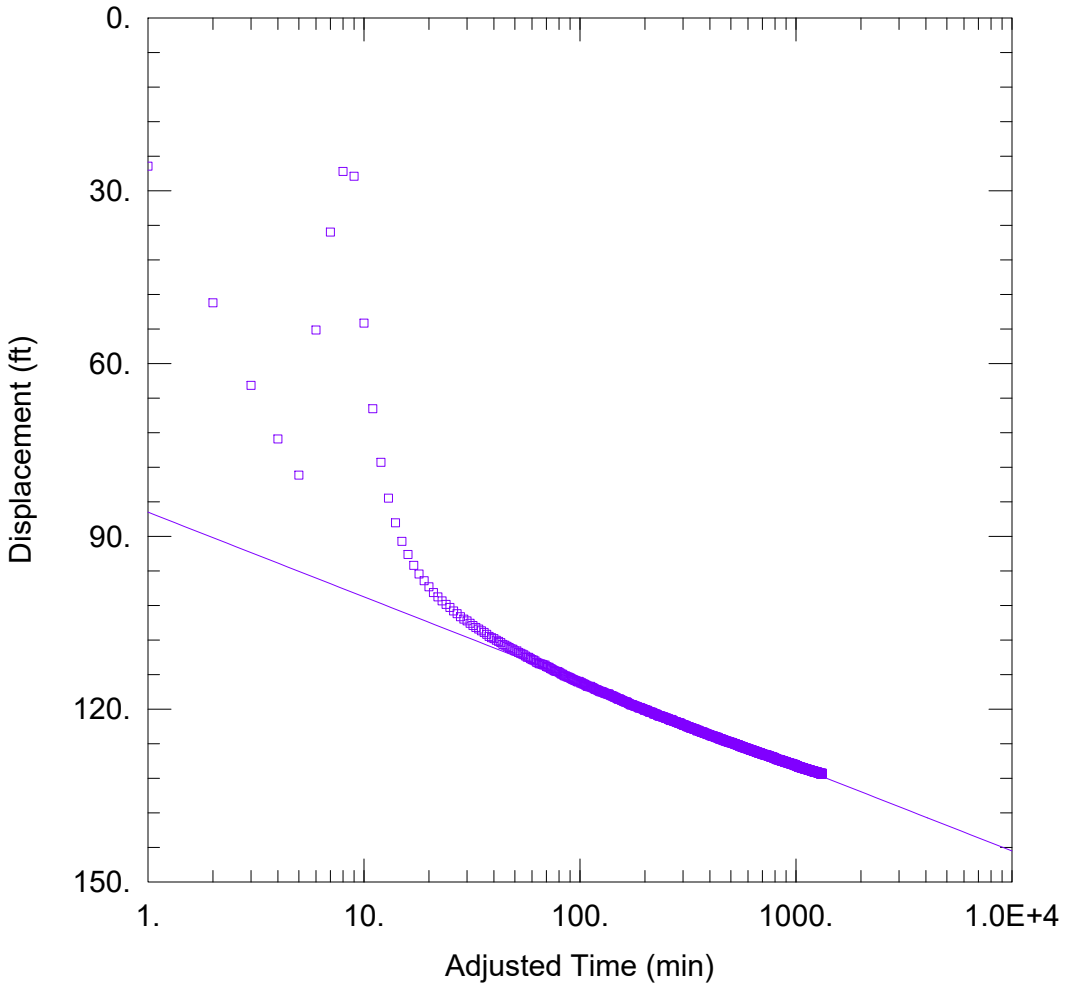
Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW CHL Well No. 1 Temperature (F)	PW CHL Well No. 1 Water Level (ft bgs)	PW CHL Well No. 1 Water Level (ft MSL)	PW CHL Well No. 1 Drawdown (ft)	PW CHL Well No. 1 Pump Rate (gpm)	PW CHL Well No. 1 Specific Capacity (gpm/ft)	Comments	OW CH 290 Well No. 1 Water Level (ft MSL)	OW CH 290 Well No. 1 Drawdown (ft)	OW LT Well No. 1 Water Level (ft MSL)	OW LT Well No. 1 Drawdown (ft)
5/6/25 10:58 PM	660		78.27	651.08	351.92	127.47				467.76	2.76	476.22	1.95
5/6/25 11:58 PM	720		78.27	651.48	351.52	127.87				467.63	2.88	476.01	2.16
5/7/25 12:58 AM	780		78.25	651.98	351.03	128.36				467.43	3.09	475.90	2.27
5/7/25 1:58 AM	840		78.24	652.41	350.59	128.80				467.27	3.25	475.76	2.41
5/7/25 2:58 AM	900		78.20	652.85	350.15	129.24				467.16	3.36	475.57	2.60
5/7/25 3:58 AM	960		78.18	653.11	349.89	129.50				467.00	3.52	475.42	2.75
5/7/25 4:58 AM	1,020		78.17	653.59	349.42	129.97				466.87	3.65	475.19	2.98
5/7/25 5:58 AM	1,080		78.17	653.85	349.15	130.24				466.80	3.71	475.11	3.06
5/7/25 6:58 AM	1,140		78.17	654.21	348.79	130.60				466.63	3.88	474.92	3.24
5/7/25 7:58 AM	1,200		78.17	654.37	348.63	130.76				466.56	3.96	474.87	3.30
5/7/25 8:58 AM	1,260		78.17	654.64	348.36	131.03	31.0	0.24	1.65			474.59	3.58
5/7/25 9:58 AM	1,320		78.17	654.87	348.13	131.25						474.51	3.66
5/7/25 10:04 AM	1,326	0	78.17	654.87	348.13	131.25	31.0	0.24	Pump Stop			474.49	3.67
5/7/25 10:05 AM	1,327	1	78.16	638.37	364.63	114.76						474.48	3.69
5/7/25 10:06 AM	1,328	2	78.17	618.99	384.01	95.37						474.56	3.60
5/7/25 10:07 AM	1,329	3	78.17	604.91	398.09	81.29						474.40	3.77
5/7/25 10:08 AM	1,330	4	78.18	594.70	408.30	71.09						474.50	3.67
5/7/25 10:09 AM	1,331	5	78.18	587.27	415.73	63.66						474.44	3.73
5/7/25 10:10 AM	1,332	6	78.19	581.74	421.26	58.12						474.55	3.62
5/7/25 10:11 AM	1,333	7	78.20	577.50	425.50	53.89						474.55	3.62
5/7/25 10:12 AM	1,334	8	78.21	574.27	428.74	50.65						474.50	3.66
5/7/25 10:13 AM	1,335	9	78.22	571.67	431.33	48.05						474.46	3.71
5/7/25 10:14 AM	1,336	10	78.25	569.53	433.47	45.91						474.42	3.75
5/7/25 10:15 AM	1,337	11	78.30	567.78	435.22	44.17						474.47	3.70
5/7/25 10:16 AM	1,338	12	78.35	566.22	436.78	42.61						474.47	3.70
5/7/25 10:17 AM	1,339	13	78.41	564.94	438.06	41.32						474.51	3.66
5/7/25 10:18 AM	1,340	14	78.47	563.81	439.19	40.20						474.49	3.68
5/7/25 10:19 AM	1,341	15	78.52	562.78	440.23	39.16						474.48	3.68
5/7/25 10:24 AM	1,346	20	78.71	558.99	444.02	35.37						474.40	3.77
5/7/25 10:29 AM	1,351	25	78.79	556.42	446.58	32.80						474.40	3.77
5/7/25 10:34 AM	1,356	30	78.84	554.57	448.43	30.96						474.45	3.72
5/7/25 10:49 AM	1,371	45	78.83	550.79	452.21	27.18						474.43	3.74
5/7/25 11:04 AM	1,386	60	78.77	548.24	454.76	24.63						474.42	3.75
5/7/25 11:19 AM	1,401	75	78.70	546.47	456.53	22.85						474.42	3.75
5/7/25 11:34 AM	1,416	90	78.67	545.09	457.91	21.48						474.45	3.72

Note: bgs = below ground surface Column Pipe Diameter = 1 1/2 inches Horsepower = 7.5 HP
MSL = Mean Sea Level Pump Setting = 840 ft

Citizen House Ledgestone Well No. 1 - Aquifer Test (May 6, 2025)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW CHL Well No. 1 Temperature (F)	PW CHL Well No. 1 Water Level (ft bgs)	PW CHL Well No. 1 Water Level (ft MSL)	PW CHL Well No. 1 Drawdown (ft)	PW CHL Well No. 1 Pump Rate (gpm)	PW CHL Well No. 1 Specific Capacity (gpm/ft)	Comments	OW CH 290 Well No. 1 Water Level (ft MSL)	OW CH 290 Well No. 1 Drawdown (ft)	OW LT Well No. 1 Water Level (ft MSL)	OW LT Well No. 1 Drawdown (ft)
5/7/25 12:04 PM	1,446	120	78.66	543.00	460.00	19.38						474.40	3.77
5/7/25 12:34 PM	1,476	150	78.72	541.46	461.54	17.85						474.48	3.68
5/7/25 1:04 PM	1,506	180	78.69	540.29	462.71	16.67						474.49	3.68
5/7/25 2:04 PM	1,566	240	78.66	538.47	464.53	14.85						474.61	3.56
5/7/25 3:04 PM	1,626	300	78.79	536.62	466.38	13.01						474.63	3.53
5/7/25 4:04 PM	1,686	360	78.89	535.54	467.46	11.93						474.85	3.31
5/7/25 5:04 PM	1,746	420	78.90	534.71	468.29	11.10						474.99	3.18
5/7/25 6:04 PM	1,806	480	78.89	534.02	468.98	10.41						475.07	3.10
5/7/25 7:04 PM	1,866	540	78.89	533.43	469.57	9.82						475.10	3.07
5/7/25 8:04 PM	1,926	600	78.88	532.91	470.09	9.30						475.20	2.97
5/7/25 9:04 PM	1,986	660	78.87	532.43	470.57	8.81						475.31	2.86
5/7/25 10:04 PM	2,046	720	78.86	532.03	470.97	8.41						475.36	2.81
5/7/25 11:04 PM	2,106	780	78.85	531.64	471.36	8.02						475.45	2.72
5/8/25 12:04 AM	2,166	840	78.85	531.32	471.68	7.71						475.51	2.66
5/8/25 1:04 AM	2,226	900	78.85	530.96	472.04	7.35						475.60	2.57
5/8/25 2:04 AM	2,286	960	78.83	530.69	472.31	7.08						475.74	2.43
5/8/25 3:04 AM	2,346	1020	78.83	530.43	472.57	6.81						475.87	2.30
5/8/25 4:04 AM	2,406	1080	78.81	530.14	472.86	6.52						475.90	2.27
5/8/25 5:04 AM	2,466	1140	78.81	529.98	473.02	6.37						475.90	2.27
5/8/25 6:04 AM	2,526	1200	78.81	529.68	473.32	6.06						475.96	2.21
5/8/25 7:04 AM	2,586	1260	78.80	529.50	473.50	5.89						475.99	2.17
5/8/25 8:04 AM	2,646	1320	78.79	529.33	473.67	5.72						476.09	2.08
5/8/25 9:04 AM	2,706	1380	78.79	529.17	473.83	5.55						476.14	2.02
5/8/25 10:04 AM	2,766	1440	78.78	529.10	473.90	5.49						476.18	1.99

Note: bgs = below ground surface Column Pipe Diameter = 1 1/2 inches Horsepower = 7.5 HP
MSL = Mean Sea Level Pump Setting = 840 ft



WELL TEST ANALYSIS

Data Set: \...\CH Ledgestone.aqt
Date: 06/19/25 Time: 16:56:55

PROJECT INFORMATION

Company: WRGS
Client: Endeavor
Location: Travis County
Test Well: CHL Well
Test Date: 5/6/25

AQUIFER DATA

Saturated Thickness: 317. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

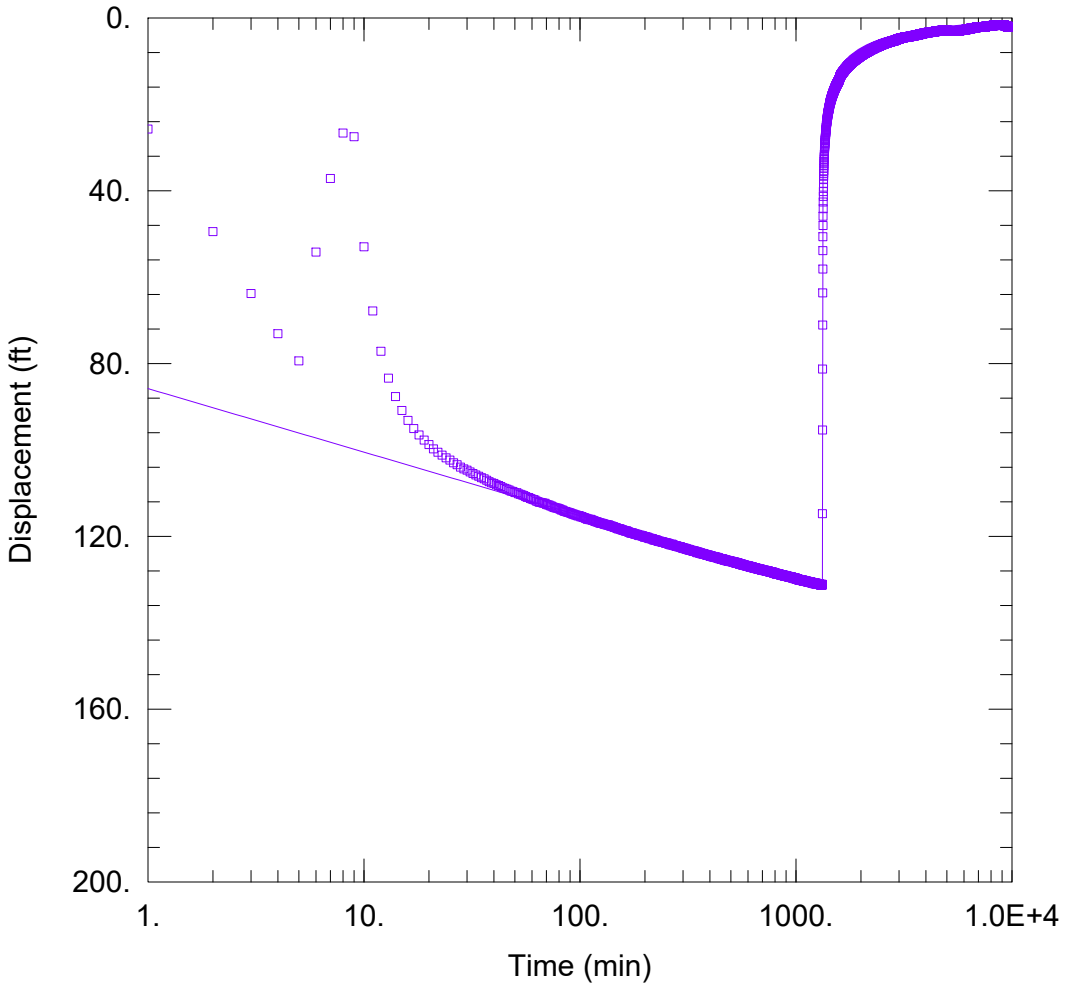
Well Name	X (ft)	Y (ft)
CH Ledgestone Well	3057443.8	10055198.7

Observation Wells

Well Name	X (ft)	Y (ft)
CH Ledgestone Well	3057443.8	10055198.7

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob
T = 74.85 ft^2/day S = 1.212E-6



WELL TEST ANALYSIS

Data Set: \...\CH Ledgestone.aqt
Date: 06/19/25 Time: 16:56:07

PROJECT INFORMATION

Company: WRGS
Client: Endeavor
Location: Travis County
Test Well: CHL Well
Test Date: 5/6/25

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
CH Ledgestone Well	3057443.8	10055198.7

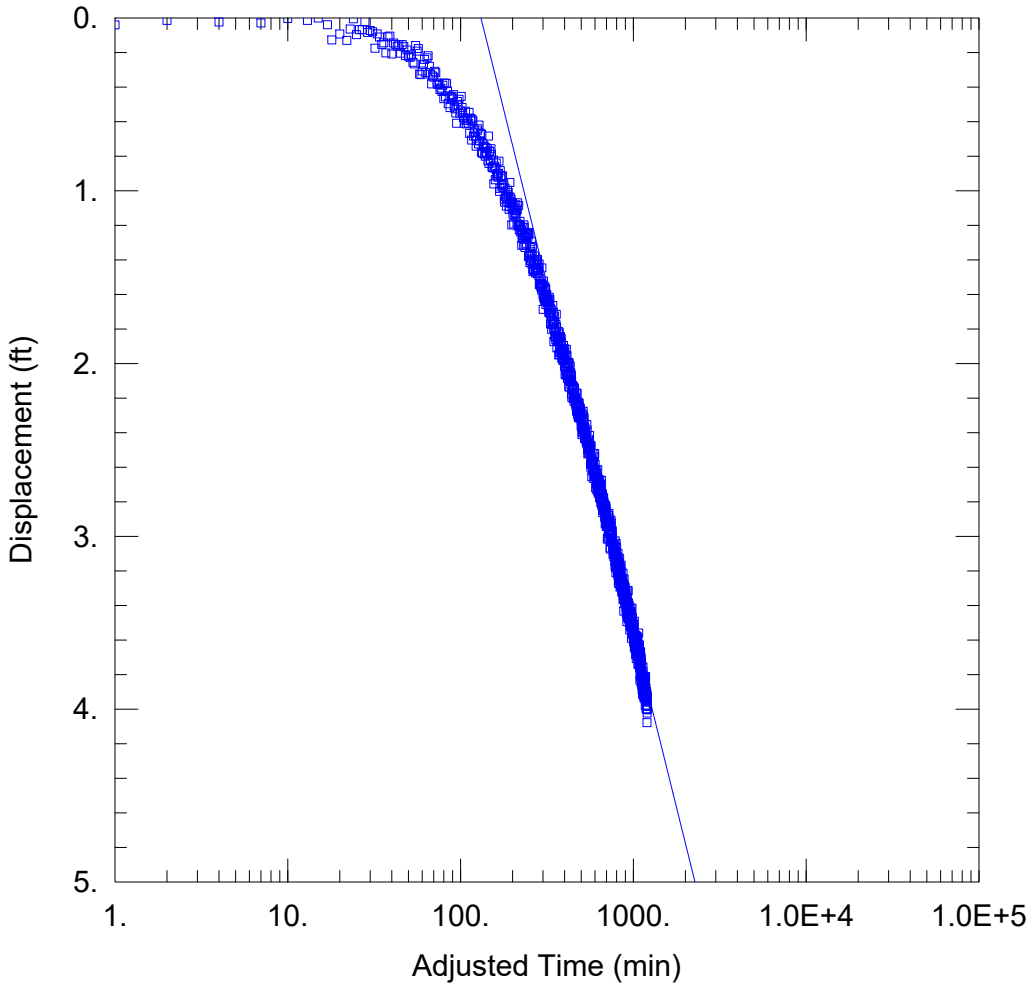
Observation Wells

Well Name	X (ft)	Y (ft)
CH Ledgestone Well	3057443.8	10055198.7

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 74.85 ft^2/day
S = 1.212E-6
Kz/Kr = 1.
b = 317. ft



WELL TEST ANALYSIS

Data Set: \...\CH290.aqt
Date: 06/20/25 Time: 08:25:39

PROJECT INFORMATION

Company: WRGS
Client: Endeavor
Location: Travis County
Test Well: CHL Well
Test Date: 5/6/25

AQUIFER DATA

Saturated Thickness: 297. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
CH Ledgestone Well	3057443.8	10055198.7

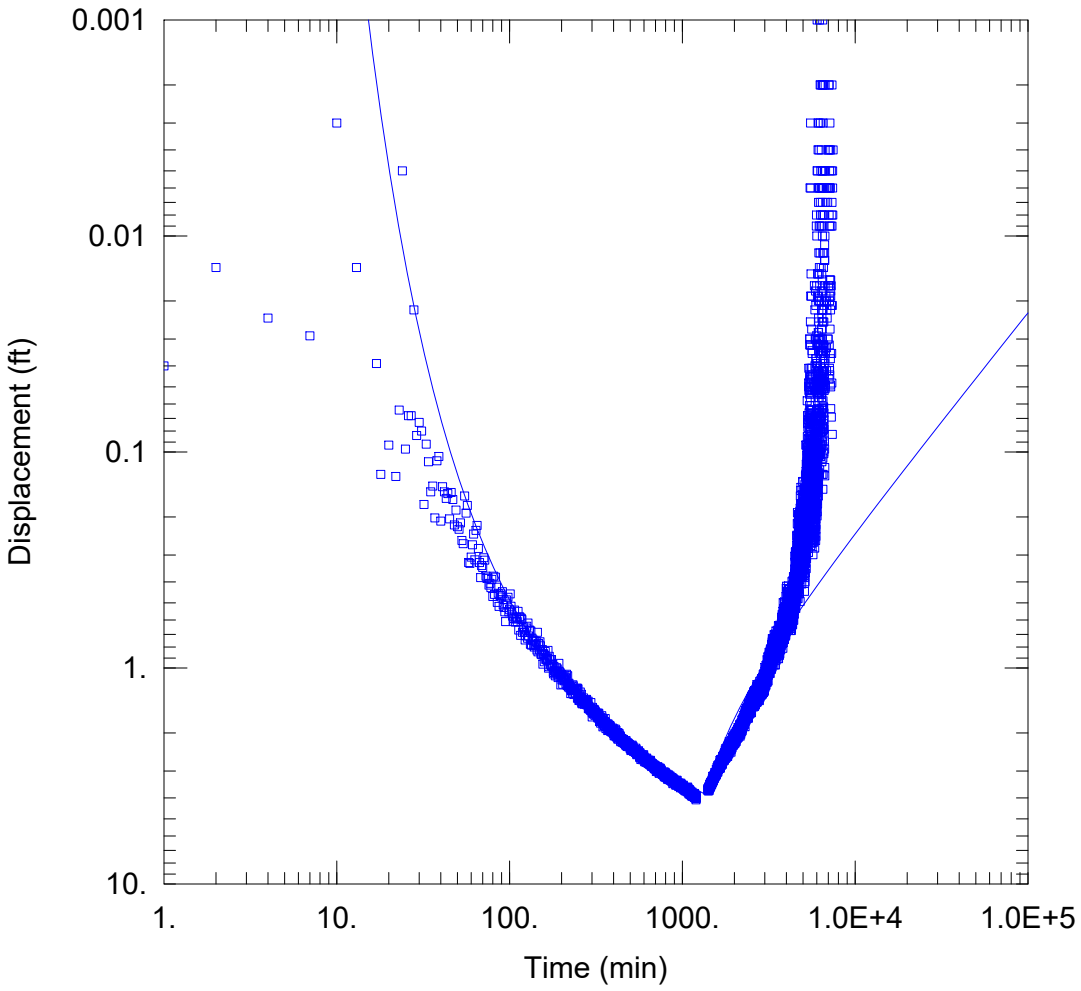
Observation Wells

Well Name	X (ft)	Y (ft)
CH 290 Well	3058316.206	10055393.5

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 272.6 ft^2/day S = 6.99E-5



WELL TEST ANALYSIS

Data Set: \...\CH290.aqt
Date: 06/20/25 Time: 08:24:14

PROJECT INFORMATION

Company: WRGS
Client: Endeavor
Location: Travis County
Test Well: CHL Well
Test Date: 5/6/25

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
CH Ledgestone Well	3057443.8	10055198.7

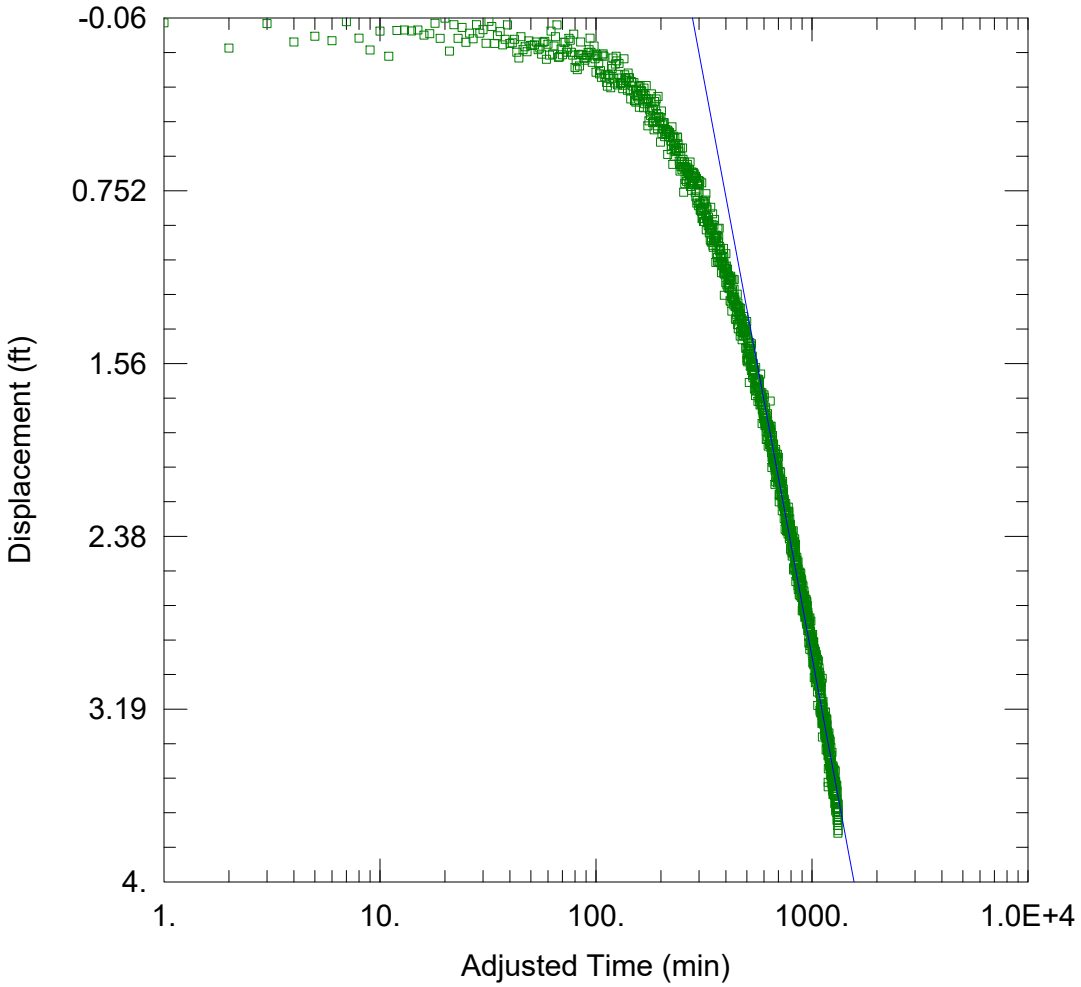
Observation Wells

Well Name	X (ft)	Y (ft)
CH 290 Well	3058316.206	10055393.5

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 280.5 ft^2/day
S = 8.288E-5
Kz/Kr = 1.
b = 297. ft



WELL TEST ANALYSIS

Data Set: \...\Ledgestone TH.aqt
Date: 06/19/25 Time: 16:54:59

PROJECT INFORMATION

Company: WRGS
Client: Endeavor
Location: Travis County
Test Well: CHL Well
Test Date: 5/6/25

AQUIFER DATA

Saturated Thickness: 318. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
CH Ledgestone Well	3057443.8	10055198.7

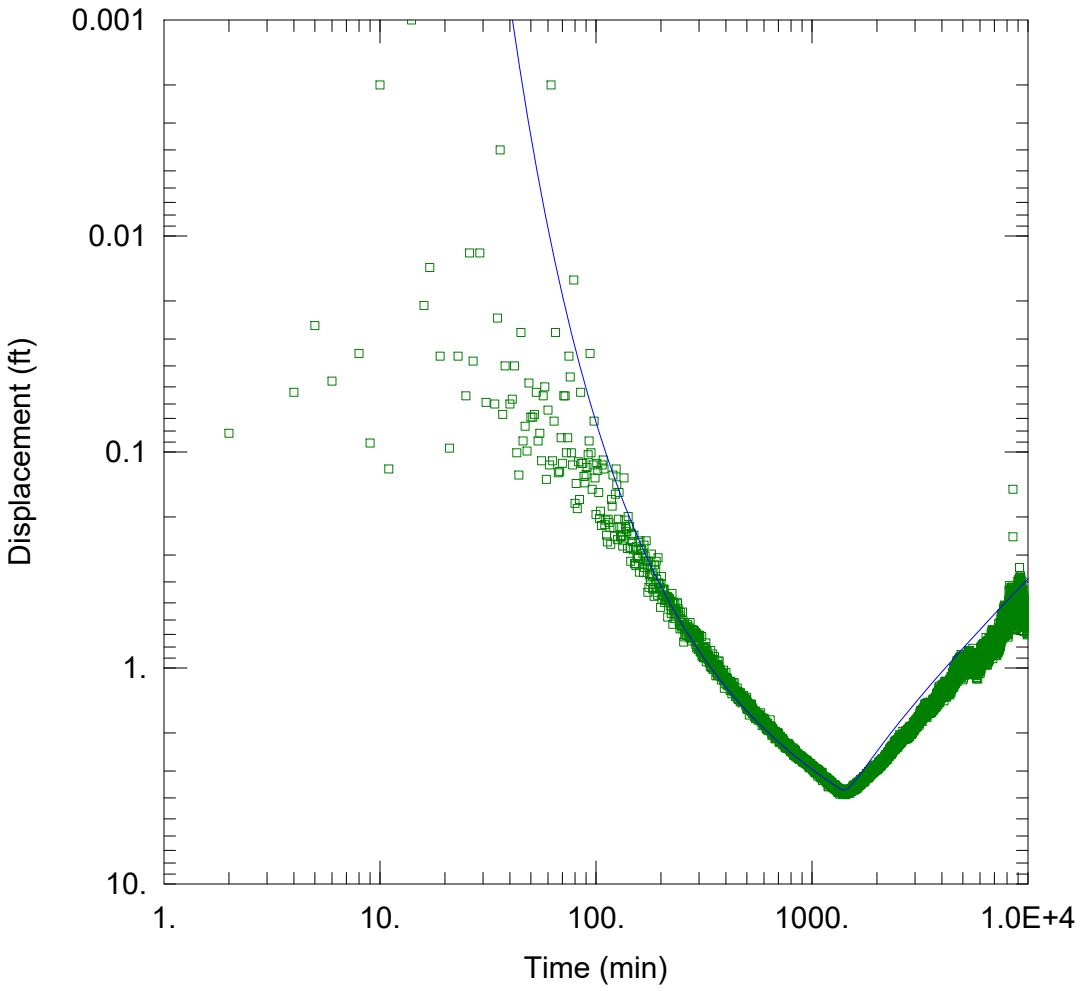
Observation Wells

Well Name	X (ft)	Y (ft)
Ledgestone TH Well	3056510.466	10054869.4

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 202.9 ft^2/day S = 9.27E-5



WELL TEST ANALYSIS

Data Set: \...\Ledgestone TH.aqt
Date: 06/19/25 Time: 16:41:22

PROJECT INFORMATION

Company: WRGS
Client: Endeavor
Location: Travis County
Test Well: CHL Well
Test Date: 5/6/25

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
CH Ledgestone Well	3057443.8	10055198.7

Observation Wells

Well Name	X (ft)	Y (ft)
Ledgestone TH Well	3056510.466	10054869.4

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 171.1 ft^2/day
S = 0.0001197
Kz/Kr = 1.
b = 318. ft

Appendix E

Water Quality

Email information for report date:

6/3/25 11:10

I014372

Bee Cave Drilling

Attn: Greg Svetlik

185 Angel Fire Drive
Dripping Springs, TX 78620

Please contact us for your sampling needs or if you have any questions. Some convenient contacts are listed below. You can also access your results and reports through our ClientConnect ™ portal on our website (www.aqua-techlabs.com).

For sampling questions:

samplingbryan@aqua-techlabs.com (Bryan area)
samplingaustin@aqua-techlabs.com (Austin area)

reporting@aqua-techlabs.com (report questions)

Aqua-Tech values you as a customer and encourages you to speak with our staff at 979-778-3707 or the above emails if you have questions.

Thank you for your business,
June M. Brien
Executive Technical Director

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The analyses summarized in this report were performed by Aqua-Tech Laboratories, Inc. unless otherwise noted. Aqua-Tech Laboratories, Inc. holds accreditation from the State of Texas in accordance with TNI and/or through the TCEQ Drinking Water Commercial Laboratory Approval Program.

The following abbreviations indicate certification status:

NEL	TNI accredited parameter.
ANR	Accreditation not offered by the State of Texas.
DWP	Approval through the TCEQ Drinking Water Commercial Laboratory Approval Program.
INF	Aqua-Tech Laboratories, Inc. is not accredited for this parameter. It is reported on an informational basis only.

Subcontracted data summarized in this report is indicated by "Sub" in the Lab column.

Certificate: TX-C24-00311

TCEQ Lab ID T104704371

General Definitions:

NR	Not Reported.
RPD	Relative Percent Difference.
% R	Percent Recovery.
dry	Results with the "dry" unit designation are reported on a "dry weight" basis.
SQL	The Sample Quantitation Limit is the value below which the parameter cannot reliably be detected. The SQL includes all sample preparations, dilutions and / or concentrations.
Adj MDL	The Adjusted Method Detection Limit is the MDL value adjusted for any sample dilutions or concentrations .
MDL	The Method Detection Limit is the lowest theoretical value that is statistically different from zero for a specific method, taking into account all preparation steps and instrument settings.

All samples are reported on an "as received" basis unless the designation "dry" is added to the reported unit.

Copies of Aqua-Tech Laboratories, Inc. procedures and individual sampling plans are available upon request. Note that samples are collected by Aqua-Tech Laboratories, Inc. personnel unless otherwise noted in the "Sample Collected" field of this report as "Client" or "CLT".

Samples included in this report were received in acceptable condition according to Aqua-Tech Laboratories, Inc. procedures and 40 CFR, Chapter I, Subchapter D, Part 136.3, TABLE II. - *Required containers, preservation techniques, and holding times*, unless otherwise noted in this report.

Record Retention:

All reports, raw data, and associated quality control data are kept on file for 10 years before being destroyed. Any client that would like copies of records must contact Aqua-Tech Laboratories, Inc. no later than six months prior to the scheduled disposal. An administrative fee for retrieval and distribution will apply.

This report was approved by:

June M. Brien, Technical Director

The results in this report apply only to the samples analyzed. This analytical report must be reproduced in its entirety unless written permission is granted by Aqua-Tech Laboratories, Inc.

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Analytical Report

Bee Cave Drilling

Report Printed: **6/3/25** **11:10**

I014372

Ledgestone Well 2

Collected: 05/07/25 09:47 by CLIENT
Received: 05/07/25 15:27 by Ana Garza

Type: Grab
Matrix: Drinking Water
C-O-C #: I014372

Lab ID# I014372-01

	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch	
General Chemistry											
Total Dissolved Solids	**1030**	mg/L		25.0	50.0	50.0	*Austin*	05/09/25 10:01 KHA	SM2540 C 2015	M193253	NEL
Nitrate as N (NO3N)	**<0.020**	mg/L			0.020	0.020	*Calc*	05/14/25 11:46 MSA	SM4500-NO3-F 2011	[CALC]	NEL
Nitrite as N	**<0.01**	mg/L		0.002	0.002	0.01	*Austin*	05/08/25 08:45 MSA	SM4500 NO2- B 2011	M193173	NEL
Nitrate/Nitrite as N	**<0.02**	mg/L		0.02	0.02	0.02	*Bryan*	05/14/25 11:46 CTG	SM4500-NO3-F 2011	M193440	ANR
Total Alkalinity as CaCO3 (pH4.5)	**226**	mg/L		5.00	20.0	20.0	*Austin*	05/12/25 07:42 MSA	SM2320 B 2011	M193305	DWP
Fluoride	**0.55**	mg/L		0.04	0.04	0.10	*Bryan*	05/12/25 10:53 ATG	SM4500-F C 2011	M193355	NEL
Metals (Total)											
Aluminum	**30.8**	ug/L		0.299	0.305	1.02	*Bryan*	05/13/25 18:35 ABM	EPA 200.8 R5.4	M193390	NEL
Arsenic	**5.47**	ug/L		0.032	0.033	0.408	*Bryan*	05/13/25 18:35 ABM	EPA 200.8 R5.4	M193390	NEL
Calcium	**117**	mg/L		0.023	0.235	1.02	*Bryan*	05/29/25 10:15 ABM	EPA 200.7 R4.4	M193476	DWP
Copper	**<1.02**	ug/L		0.029	1.02	1.02	*Bryan*	05/13/25 18:35 ABM	EPA 200.8 R5.4	M193390	NEL
Iron	**0.261**	mg/L		0.002	0.010	0.010	*Bryan*	05/14/25 17:31 ABM	EPA 200.7 R4.4	M193477	NEL
Manganese	**10.1**	ug/L		0.108	0.110	0.408	*Bryan*	05/13/25 18:35 ABM	EPA 200.8 R5.4	M193390	NEL
Potassium	**17.9**	mg/L		0.011	0.011	0.102	*Bryan*	05/14/25 17:31 ABM	EPA 200.7 R4.4	M193477	NEL
Sodium	**96.4**	mg/L		0.011	0.112	1.02	*Bryan*	05/29/25 10:15 ABM	EPA 200.7 R4.4	M193476	NEL
Zinc	**<0.510**	ug/L		0.379	0.387	0.510	*Bryan*	05/13/25 18:35 ABM	EPA 200.8 R5.4	M193390	NEL

Please see the attached subcontract report for subcontracted data.

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Analytical Report

Bee Cave Drilling

Report Printed: **6/3/25** **11:10**

I014372

General Chemistry - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Fluoride - SM4500-F C 2011														*Bryan*
Initial Cal Check	0.38	mg/L				05/12/25 10:53 ATG	0.390		96.7	90 - 110			2505158	
LCV	0.10	mg/L				05/12/25 10:53 ATG	0.0997		97.4	70 - 130			2505158	
Blank	<0.10	mg/L		0.04	0.10	05/12/25 10:53 ATG							M193355	
LCS	0.83	mg/L		0.04	0.10	05/12/25 10:53 ATG	0.798		104	92.3 - 112			M193355	
LCS Dup	0.83	mg/L		0.04	0.10	05/12/25 10:53 ATG	0.798		104	92.3 - 112	0.483	4.23	M193355	
Matrix Spike	1.21	mg/L		0.04	0.10	05/12/25 10:53 ATG	0.798	0.38	104	95.9 - 114			M193355	
Matrix Spike Dup	1.22	mg/L		0.04	0.10	05/12/25 10:53 ATG	0.798	0.38	106	95.9 - 114	1.19	3.67	M193355	
Nitrate/Nitrite as N - SM4500-NO3-F 2011														*Bryan*
Initial Cal Check	1.0	mg/L				05/14/25 11:46 CTG	0.959		106	90 - 110			2505185	
Interference Check A	2.0	mg/L				05/14/25 11:46 CTG	2.00		101	90 - 110			2505185	
Low Cal Check	0.02	mg/L				05/14/25 11:46 CTG	0.0200		100	70 - 130			2505185	
Blank	<0.02	mg/L		0.02	0.02	05/14/25 11:46 CTG							M193440	
LCS	0.51	mg/L		0.02	0.02	05/14/25 11:46 CTG	0.500		102	96.5 - 107			M193440	
LCS Dup	0.51	mg/L		0.02	0.02	05/14/25 11:46 CTG	0.500		102	96.5 - 107	0.00	1.53	M193440	
Matrix Spike	0.70	mg/L		0.02	0.02	05/14/25 11:46 CTG	0.500	0.16	108	97.8 - 108			M193440	
Matrix Spike Dup	0.70	mg/L		0.02	0.02	05/14/25 11:46 CTG	0.500	0.16	108	97.8 - 108	0.00	1.56	M193440	
Nitrite as N - SM4500 NO2- B 2011														*Austin*
Initial Cal Check	0.08	mg/L				05/08/25 08:45 MSA	0.0736		102	90 - 110			2505107	
Low Cal Check	0.009	mg/L				05/08/25 08:45 MSA	0.0100		85.5	70 - 130			2505107	
Blank	<0.01	mg/L		0.002	0.01	05/08/25 08:45 MSA							M193173	
LCS	0.08	mg/L		0.002	0.01	05/08/25 08:45 MSA	0.0800		105	90 - 110			M193173	
LCS Dup	0.08	mg/L		0.002	0.01	05/08/25 08:45 MSA	0.0800		104	90 - 110	0.867	6.75	M193173	
Matrix Spike	0.09	mg/L		0.002	0.01	05/08/25 08:45 MSA	0.0800	0.03	78.4	56.7 - 127			M193173	
Matrix Spike Dup	0.09	mg/L		0.002	0.01	05/08/25 08:45 MSA	0.0800	0.03	77.9	56.7 - 127	0.580	10.6	M193173	
Initial Cal Check	0.08	mg/L				10/04/24 08:45 MSA	0.0740		105	90 - 110			2410074	
Total Alkalinity as CaCO3 (pH4.5) - SM2320 B 2011														*Austin*
Initial Cal Check	6.87	mg/L				05/12/25 07:42 MSA	6.86		100	97 - 103			2505148	
Initial Cal Check	9.14	mg/L				05/12/25 07:42 MSA	9.18		99.6	97 - 103			2505148	
Low Cal Check	20.9	mg/L				05/12/25 07:42 MSA	18.9		111	70 - 130			2505148	
Duplicate	222	mg/L		20.0	20.0	05/12/25 07:42 MSA		221			0.767	5.37	M193305	
LCS	76.9	mg/L		20.0	20.0	05/12/25 07:42 MSA	75.2		102	94 - 108			M193305	
LCS Dup	76.6	mg/L		20.0	20.0	05/12/25 07:42 MSA	75.2		102	94 - 108	0.443	5.9	M193305	

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Analytical Report

Bee Cave Drilling

Report Printed: **6/3/25** **11:10**

I014372

General Chemistry - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Total Dissolved Solids - SM2540 C 2015														*Austin*
Blank	<25.0	mg/L		25.0	25.0	05/09/25 10:01 KHA							M193253	
Duplicate	328	mg/L		50.0	50.0	05/09/25 10:01 KHA		332			1.21	15.6	M193253	
Reference	496	mg/L		100	100	05/09/25 10:01 KHA	502		98.8	66 - 140			M193253	

Metals (Total) - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Aluminum - EPA 200.8 R5.4														*Bryan*
Blank	<1.02	ug/L		0.305	1.02	05/13/25 17:40 ABM							M193390	
LCS	105	ug/L		0.308	1.03	05/13/25 18:01 ABM	105		100	84.5 - 115.4			M193390	
LCS Dup	105	ug/L		0.308	1.03	05/13/25 18:08 ABM	105		100	84.5 - 115.4	0.146	20	M193390	
Duplicate	32.3	ug/L		0.305	1.02	05/13/25 18:14 ABM		30.8			4.77	20	M193390	
Matrix Spike	136	ug/L		0.308	1.03	05/13/25 18:21 ABM	105	30.8	100	69.5 - 130.4			M193390	
Arsenic - EPA 200.8 R5.4														*Bryan*
Blank	<0.408	ug/L		0.033	0.408	05/13/25 17:40 ABM							M193390	
LCS	10.1	ug/L		0.033	0.412	05/13/25 18:01 ABM	10.0		101	84.5 - 115.4			M193390	
LCS Dup	10.6	ug/L		0.033	0.412	05/13/25 18:08 ABM	10.0		106	84.5 - 115.4	4.33	20	M193390	
Duplicate	5.56	ug/L		0.033	0.408	05/13/25 18:14 ABM		5.47			1.66	20	M193390	
Matrix Spike	16.5	ug/L		0.033	0.412	05/13/25 18:21 ABM	10.0	5.47	110	69.5 - 130.4			M193390	
Calcium - EPA 200.7 R4.4														*Bryan*
Blank	<0.102	mg/L		0.023	0.102	05/29/25 09:57 ABM							M193476	
LCS	10.2	mg/L		0.024	0.104	05/29/25 10:01 ABM	10.0		102	84.5 - 115.4			M193476	
LCS Dup	10.3	mg/L		0.024	0.104	05/29/25 10:04 ABM	10.0		103	84.5 - 115.4	0.234	20	M193476	
Duplicate	115	mg/L		0.235	1.02	05/29/25 10:08 ABM		117			1.60	20	M193476	
Matrix Spike	221	mg/L		0.239	1.04	05/29/25 10:11 ABM	100	117	105	69.5 - 130.4			M193476	
Copper - EPA 200.8 R5.4														*Bryan*
Blank	<1.02	ug/L		1.02	1.02	05/13/25 17:40 ABM							M193390	
LCS	969	ug/L		1.03	1.03	05/13/25 18:01 ABM	960		101	84.5 - 115.4			M193390	
LCS Dup	982	ug/L		1.03	1.03	05/13/25 18:08 ABM	960		102	84.5 - 115.4	1.33	20	M193390	
Duplicate	0.271	ug/L	*(0.271)*	1.02	1.02	05/13/25 18:14 ABM		0.237			13.4	20	M193390	
Matrix Spike	1000	ug/L		1.03	1.03	05/13/25 18:21 ABM	960	0.237	104	69.5 - 130.4			M193390	

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Analytical Report

Bee Cave Drilling

Report Printed: **6/3/25** **11:10**

I014372

Metals (Total) - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Iron - EPA 200.7 R4.4														*Bryan*
Blank	<0.010	mg/L		0.010	0.010	05/14/25 17:14 ABM							M193477	
LCS	1.04	mg/L		0.010	0.010	05/14/25 17:17 ABM	1.00		104	84.5 - 115.4			M193477	
LCS Dup	1.03	mg/L		0.010	0.010	05/14/25 17:21 ABM	1.00		103	84.5 - 115.4	0.454	20	M193477	
Duplicate	0.038	mg/L		0.010	0.010	05/14/25 17:24 ABM		0.033			12.1	20	M193477	
Matrix Spike	1.05	mg/L		0.010	0.010	05/14/25 17:28 ABM	1.00	0.033	102	69.5 - 130.4			M193477	
Manganese - EPA 200.8 R5.4														*Bryan*
Blank	<0.408	ug/L		0.110	0.408	05/13/25 17:40 ABM							M193390	
LCS	105	ug/L		0.111	0.412	05/13/25 18:01 ABM	105		100	84.5 - 115.4			M193390	
LCS Dup	106	ug/L		0.111	0.412	05/13/25 18:08 ABM	105		101	84.5 - 115.4	1.05	20	M193390	
Duplicate	9.78	ug/L		0.110	0.408	05/13/25 18:14 ABM		10.1			3.13	20	M193390	
Matrix Spike	117	ug/L		0.111	0.412	05/13/25 18:21 ABM	105	10.1	102	69.5 - 130.4			M193390	
Potassium - EPA 200.7 R4.4														*Bryan*
Blank	<0.102	mg/L		0.011	0.102	05/14/25 17:13 ABM							M193477	
LCS	9.67	mg/L		0.011	0.104	05/14/25 17:17 ABM	10.0		96.7	84.5 - 115.4			M193477	
LCS Dup	9.48	mg/L		0.011	0.104	05/14/25 17:20 ABM	10.0		94.8	84.5 - 115.4	1.98	20	M193477	
Duplicate	3.56	mg/L		0.011	0.102	05/14/25 17:24 ABM		3.43			3.69	20	M193477	
Matrix Spike	15.7	mg/L		0.011	0.104	05/14/25 17:27 ABM	10.0	3.43	122	69.5 - 130.4			M193477	
Sodium - EPA 200.7 R4.4														*Bryan*
Blank	<0.102	mg/L		0.011	0.102	05/29/25 09:57 ABM							M193476	
LCS	10.8	mg/L		0.011	0.104	05/29/25 10:01 ABM	10.0		108	84.5 - 115.4			M193476	
LCS Dup	10.9	mg/L		0.011	0.104	05/29/25 10:04 ABM	10.0		109	84.5 - 115.4	0.723	20	M193476	
Duplicate	94.2	mg/L		0.112	1.02	05/29/25 10:08 ABM		96.4			2.31	20	M193476	
Matrix Spike	210	mg/L		0.114	1.04	05/29/25 10:11 ABM	100	96.4	114	69.5 - 130.4			M193476	
Zinc - EPA 200.8 R5.4														*Bryan*
Blank	<0.510	ug/L		0.387	0.510	05/13/25 17:40 ABM							M193390	
LCS	102	ug/L		0.390	0.515	05/13/25 18:01 ABM	105		96.9	84.5 - 115.4			M193390	
LCS Dup	104	ug/L		0.390	0.515	05/13/25 18:08 ABM	105		99.4	84.5 - 115.4	2.52	20	M193390	
Duplicate	<0.510	ug/L		0.387	0.510	05/13/25 18:14 ABM		<0.510				20	M193390	
Matrix Spike	101	ug/L		0.390	0.515	05/13/25 18:21 ABM	105	<0.515	96.6	69.5 - 130.4			M193390	

Preparation Procedures - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch

Form: C:\ELMNT\FORMAT\ATL 090124 FIN_LS.RPT

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Analytical Report

Bee Cave Drilling

Report Printed: **6/3/25** **11:10**

I014372

Preparation Procedures - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Turbidity - SM2130 B 2011														*Bryan*
Initial Cal Check	10	NTU				01/09/25 10:10 ABM	10.8		92.2	90 - 110			2501097	
Low Cal Check	1.2	NTU				01/09/25 10:10 ABM	1.00		124	70 - 130			2501097	

Sample Preparation Summary

Sample	Method	Prepared	Lab	Bottle	Initial	Units	Final	Units	External Dilution Factor	Batch
I014372-01										
Aluminum	EPA 200.8 R5.4	5/13/25 11:30 ABM	Bryan	E	10.0	mL	10.2	mL	1	M193390
Arsenic	EPA 200.8 R5.4	5/13/25 11:30 ABM	Bryan	E	10.0	mL	10.2	mL	1	M193390
Calcium	EPA 200.7 R4.4	5/14/25 12:30 ABM	Bryan	E	1.00	mL	10.2	mL	1	M193476
Copper	EPA 200.8 R5.4	5/13/25 11:30 ABM	Bryan	E	10.0	mL	10.2	mL	1	M193390
Fluoride	SM4500-F C 2011	5/12/25 10:53 ATG	Bryan	D	25.0	mL	25.0	mL	1	M193355
Iron	EPA 200.7 R4.4	5/14/25 12:30 ABM	Bryan	E	10.0	mL	10.2	mL	1	M193477
Manganese	EPA 200.8 R5.4	5/13/25 11:30 ABM	Bryan	E	10.0	mL	10.2	mL	1	M193390
Nitrate/Nitrite as N	SM4500-NO3-F 2011	5/14/25 7:38 CTG	Bryan	G	10.0	mL	10.0	mL	1	M193440
Nitrite as N	SM4500 NO2- B 2011	5/8/25 8:45 MSA	Austin	F	25.0	mL	25.0	mL	1	M193173
Potassium	EPA 200.7 R4.4	5/14/25 12:30 ABM	Bryan	E	10.0	mL	10.2	mL	1	M193477
Sodium	EPA 200.7 R4.4	5/14/25 12:30 ABM	Bryan	E	1.00	mL	10.2	mL	1	M193476
Total Alkalinity as CaCO3 (pH4.5)	SM2320 B 2011	5/12/25 7:42 MSA	Austin	C	50.0	mL	200	mL	1	M193305
Total Dissolved Solids	SM2540 C 2015	5/9/25 10:01 CES	Austin	F	50.0	mL	100	mL	1	M193253
Turbidity	SM2130 B 2011	5/13/25 7:28 ATG	Bryan	E	10.0	mL	10.0	mL	1	M193379
Zinc	EPA 200.8 R5.4	5/13/25 11:30 ABM	Bryan	E	10.0	mL	10.2	mL	1	M193390

Chain-of-Custody and Analysis Request

Client / Project Name: OP III ATX Ledgestone — Bee Cave Drilling — Commercial Water Wells

Contact Information
Name: Greg Svetlik
Address: 185 Angel Fire Drive
City: Dripping Springs
State: TX Zip: 78620
Phone: (512) 894-4221
email:

Definitions
DW Drinking Water
NP Non-Potable Water
S Solid
CM Custody Maintained
CTU Custody Transfer Unbroken
CT Corrected Temperature

Reagent tracking is available upon request.

Aqua-Tech laboratories, Inc.

Austin: 3512 Montopolis Dr. Austin, TX 78744 512.301.9559
Bryan: 635 Phil Gramm Blvd. Bryan, TX 77807 979.778.3707

TCEQ LAB ID: T104704371

Test results meet all accreditation/certification requirements unless stated otherwise.

C-O-C # **I014372**

Page 1 of 1

rte_ATL COC 012723.rpt

Analyses Requested: "A" prefix indicates Austin, all others Bryan or Subcontracted, indicated by [SUB].
Name format: Analysis-Matrix-Technology-Method.

[NEL] = NELAP accredited parameter
[SUB] = NELAP accredited subcontracted parameter
[CNR] = No NELAP accreditation required or available
[INF] = Informational only (not NELAC certified)

By relinquishing the samples listed below to Aqua-Tech laboratories, Inc. (ATL), the client agrees to the following terms. Samples will be analyzed by a method that is within ATL's NELAP fields of accreditation (FoA). Analytes requiring an accredited method that is not within ATL's FoA will be subcontracted to a NELAP lab that is accredited for that method. Clients will be notified of the subcontract lab's details. Other analytes not requiring accreditation will be analyzed by a compendial method. If a specific method is required, the client will note the method in the "Analysis Requested" column. The client approves all method modifications documented by ATL or the subcontract lab.
A current list of ATL's NELAC fields of accreditation and other methods are available on request.

Comments:
P.O. # 10114

- LAB RECEIPT - T03

Temperature - CT (C):	2.9
Preservation Correct:	Yes
Post-Preservatives:	N/A
Thermometer ID:	0837480
pH Paper ID:	0820913

ko_A COC MULTI 043020.rpt

Sample Custody

Relinquished (print & sign)	GREG SVETLIK / Greg Svetlik	☒ Sampler ☐ Client ☐ ATL Field	Date 5/7/25 Time 9:52 A	☑ Iced / Refrig ☑ Custody Sealed
Received (print & sign)	Ana Garza / Ana Garza	☐ Client ☒ ATL Field	Date 05/09/25 Time 0952	☒ Iced / Refrig ☒ CM / CTU
Relinquished (print & sign)		☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU
Received (print & sign)		☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU
Relinquished (print & sign)	Ana Garza	☐ Client ☒ ATL Field	Date 05/07/25 Time 15:27	☒ Iced / Refrig ☒ CM / CTU / Sealed
Received (print & sign)	Ana Garza	Lab X	Date 05/07/25 Time 15:27	Cond Good X Iced / Refrig X CM / CTU X

Field Sample ID	Start Date	Start Time	End Date	End Time	Composite Type	Sample Matrix	Container (Checked box indicates bottle arrived in lab) (Volume - Type - Preservative)	Lab ID
Ledgestone Well 2	5/7/25	09:47 Am	- N/A -	- N/A -	Grab	DW	☑ A [SUB] ANA Cl SO4 0.25LP ☑ B [SUB] ANA 0.5LP HNO3 pH<2 ☑ C ALK 0.25LP ☑ D Fl 0.5LP ☑ E Metals 0.5LP HNO3 pH<2 ☑ F NO2 TDS 0.5LP ☑ G NO3 0.1LP H2SO4 pH<2	I014372-01

A Alkalinity DW Probe SM 2320 B [DWP] [DWP]
A TDS DW Grav SM2540 C [NEL]
Ca DW ICP EPA 200.7 [DWP] [DWP]
F DW Probe SM 4500 F- C [NEL]
Mg DW Total ICP EPA 200.7 [SUB]
NO3N + NO2N DW RFA SM4500 NO3 F [CNR]
Turbidity DW SCAN SM2130 B
Zn DW NP ICP-MS EPA 200.8 [NEL]
A NO2N DW Spec SM4500 NO2 B [NEL]
Al DW NP ICP-MS EPA 200.8 [NEL]
Cl DW IC EPA 300.0 [SUB]
Fe DW ICP EPA 200.7 [NEL]
Mn DW NP ICP-MS EPA 200.8 [NEL]
SO4 DW IC EPA 300.0 [SUB]
Y Billing Digest, Metals Aq ICP
A NO3N DW Calc SM4500 NO3 F [NEL]
As DW NP ICP-MS EPA 200.8 [NEL]
Cu DW NP ICP-MS EPA 200.8 [NEL]
K DW ICP EPA 200.7 [NEL]
Na DW ICP EPA 200.7 [NEL]
Sub-contract Report Attached
Y Billing Notes

2600 Dudley Rd. Kilgore, Texas 75662
24 Waterway Avenue, Suite 375 The Woodlands, TX 77380
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Project
1146877

AQU1-G

AquaTech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

Printed 05/16/2025
6:45

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I014372

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1146877_r03_03_ProjectResults	SPL Kilgore Project P:1146877 C:AQU1 Project Results t:304 PO: I014372	2
1146877_r03_06_I_ProjectTRRP	SPL Kilgore Project P:1146877 C:AQU1 Project TRRP Results Report for Class I	2
1146877_r03_06_M_ProjectTRRP	SPL Kilgore Project P:1146877 C:AQU1 Project TRRP Results Report for Class M	1
1146877_r10_05_ProjectQC	SPL Kilgore Project P:1146877 C:AQU1 Project Quality Control Groups	2
1146877_r99_09_CoC__1_of_1	SPL Kilgore CoC AQU1 1146877_1_of_1	2
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SAMPLE CROSS REFERENCE

Project
1146877

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lo14372

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Bryan, TX 77807-9104

Sample	Sample ID	Taken	Time	Received
2406671	*I014372-01*	05/07/2025	09:47:00	05/09/2025

Bottle 01 16 oz HNO3 Metals Plastic
Bottle 02 Client supplied plastic
Bottle 03 Prepared Bottle: ICP Preparation for Metals (Batch 1174504) Volume: 50.00000 mL <== Derived from 01 (50 ml)

Method	Bottle	PrepSet	Preparation	QcGroup	Analytical
EPA 300.0 2.1	01	1174596	05/09/2025	1174596	05/09/2025
EPA 300.0 2.1	02	1175497	05/14/2025	1175497	05/14/2025
EPA 200.7 4.4	03	1174504	05/12/2025	1174569	05/12/2025

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I014372

RESULTS

Sample Results

2406671 **I014372-01** Received: 05/09/2025

Drinking Water | Collected by: Client | AquaTech Laboratorie | PO: I014372
Taken: 05/07/2025 09:47:00

EPA 200.7 4.4 — Prepared: 1174504 05/12/2025 06:30:00 — Analyzed 1174569 05/12/2025 10:36:00 — CAS

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	**Magnesium, Total**	**78.4**	**mg/L**	0.500		**7439-95-4**	03

EPA 300.0 2.1 — Prepared: 1174596 05/09/2025 14:01:00 — Analyzed 1174596 05/09/2025 14:01:00 — KAP

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	**Chloride**	**35.8**	**mg/L**	3.00			01

EPA 300.0 2.1 — Prepared: 1175497 05/14/2025 11:13:00 — Analyzed 1175497 05/14/2025 11:13:00 — KRA

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	**Sulfate**	**638**	**mg/L**	30.0			02

Sample Preparation

2406671 **I014372-01** Received: 05/09/2025

I014372

05/07/2025

EPA 200.2 2.8 — Prepared: 1174504 05/12/2025 06:30:00 — Analyzed 1174504 05/12/2025 06:30:00 — MP1

z	**Liquid Metals Digestion**	**50/50**	**ml**				01

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Project
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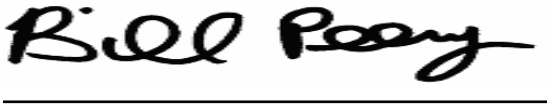
Qualifiers:

We report results on an As Received (or Wet) basis unless marked Dry Weight.

Unless otherwise noted, testing was performed at SPL, Inc.- Kilgore laboratory which holds International, Federal, and state accreditations. Please see our Websites for details.

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These analytical results relate to the sample tested. This report may NOT be reproduced EXCEPT in FULL without written approval of SPL Kilgore. Unless otherwise specified, these test results meet the requirements of NELAC.
RL is the Reporting Limit (sample specific quantitation limit) and is at or above the Method Detection Limit (MDL). CAS is Chemical Abstract Service number. RL is our Reporting Limit, or Minimum Quantitation Level. The RL takes into account the Instrument Detection Limit (IDL), Method Detection Limit (MDL), and Practical Quantitation Limit (PQL), and any dilutions and/or concentrations performed during sample preparation (EQL). Our analytical result must be above this RL before we report a value in the 'Results' column of our report (without a 'J' flag). Otherwise, we report ND (Not Detected above RL), because the result is "<" (less than) the number in the RL column. MAL is Minimum Analytical Level and is typically from regulatory agencies. Unless we report a result in the result column, or interferences prevent it, we work to have our RL at or below the MAL.



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RESULTS

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I014372

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CAS	Parameter	Results	MDL	SDL	MQL	MQLAdj	Flag	Units	Target	Bottle	Dilute
Drinking Water	**Ion Chromatography**										**EPA 300.0 2.1**
2406671	I014372-01										
		Collection:	05/07/2025	09:47:00	Client				*Received:*	05/09/2025	
	Prepared: 1174596			*Analyzed:*	1174596			5/9/25	14:01:00		
	Chloride	**35.8**	0.0593	0.593	0.300	3.00		**mg/L**	250 Secondary Standard	01	10.00
	Prepared: 1175497			*Analyzed:*	1175497			5/14/25	11:13:00		
	Sulfate	**638**	0.0605	6.05	0.300	30.0		**mg/L**	250 Secondary Standard	02	100.00

MDL is Method Detection Limit (40 CFR 136 Appendix B)
SDL is Sample Detection Limit and is the adjusted MDL (sample specific dilutions, dry weight)
MQL is the Method Quantitation Limit and corresponds to a low standard
MQLADJ is the Adjusted Method Quantitation Limit (dilutions, dry weight)

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CAS	Parameter	Results	MDL	SDL	MQL	MQLAdj	Flag	Units	Target	Bottle	Dilute
Drinking Water	**Metals**										**EPA 200.7 4.4**
2406671	**I014372-01**										
		Collection:	05/07/2025	09:47:00	Client				*Received:*	05/09/2025	
	Prepared: ***1174504***										
				Analyzed:	***1174569***			5/12/25	10:36:00		
7439-95-4	**Magnesium, Total**	**78.4**	0.00367	0.00367	0.500	0.500		**mg/L**		03	1.00

MDL is Method Detection Limit (40 CFR 136 Appendix B)
SDL is Sample Detection Limit and is the adjusted MDL (sample specific dilutions, dry weight)
MQL is the Method Quantitation Limit and corresponds to a low standard
MQLADJ is the Adjusted Method Quantitation Limit (dilutions, dry weight)
Qualifiers:

We report results on an As Received (or Wet) basis unless marked Dry Weight.

Unless otherwise noted, testing was performed at SPL, Inc.- Kilgore laboratory which holds International, Federal, and state accreditations. Please see our Websites for details.

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QUALITY CONTROL

AQU1-G

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Project
1146877

Printed 05/16/2025

Analytical Set 1174596 — EPA 300.0 2.1

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Chloride	1174596	ND	0.0593	0.300	mg/L	127590645

CCB

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Chloride	1174596	0.033	0.0593	0.300	mg/L	127590641
Chloride	1174596	0.044	0.0593	0.300	mg/L	127590661
Chloride	1174596	0.038	0.0593	0.300	mg/L	127590673

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Chloride	10.2	10.0	mg/L	102	90.0 - 110	127590640
Chloride	10.1	10.0	mg/L	101	90.0 - 110	127590660
Chloride	10.0	10.0	mg/L	100	90.0 - 110	127590672

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Chloride	1174596	5.36	5.15	5.00	85.0 - 115	107	103	mg/L	4.00	20.0

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Chloride	2406146	82.2	79.5	59.4	20.0	80.0 - 120	114	100	mg/L	12.6	20.0
Chloride	2406149	90.1	89.3	74.1	20.0	80.0 - 120	80.0	76.0 *	mg/L	5.13	20.0

Analytical Set 1175497 — EPA 300.0 2.1

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Sulfate	1175497	0.095	0.0605	0.300	mg/L	127610650

CCB

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Sulfate	1175497	-0.183	0.0605	0.300	mg/L	127610646
Sulfate	1175497	-0.207	0.0605	0.300	mg/L	127610666
Sulfate	1175497	-0.204	0.0605	0.300	mg/L	127610678

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Sulfate	9.94	10.0	mg/L	99.4	90.0 - 110	127610645
Sulfate	10.2	10.0	mg/L	102	90.0 - 110	127610665
Sulfate	10.2	10.0	mg/L	102	90.0 - 110	127610677

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Sulfate	1175497	5.28	5.30	5.00	85.4 - 124	106	106	mg/L	0.378	20.0

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%

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QUALITY CONTROL

AQU1-G

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MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Sulfate	2406671	723	738	638	100	80.0 - 120	85.0	100	mg/L	16.2	20.0
Sulfate	2406899	647	651	430	200	80.0 - 120	108	110	mg/L	1.83	20.0

Analytical Set 1174569 EPA 200.7 4.4

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Magnesium, Total	1174504	ND	0.00367	0.500	mg/L	127590200

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Magnesium, Total	25.1	25.0	mg/L	100	90.0 - 110	127590191
Magnesium, Total	25.2	25.0	mg/L	101	90.0 - 110	127590199
Magnesium, Total	25.0	25.0	mg/L	100	90.0 - 110	127590209
Magnesium, Total	24.9	25.0	mg/L	99.6	90.0 - 110	127590214

ICL

Parameter	Reading	Known	Units	Recover%	Limits%	File
Magnesium, Total	49.8	50.0	mg/L	99.6	95.0 - 105	127590185

ICV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Magnesium, Total	25.3	25.0	mg/L	101	90.0 - 110	127590189

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Magnesium, Total	1174504	5.32	5.28	5.00	85.0 - 115	106	106	mg/L	0.755	25.0

MRL Check

Parameter	Reading	Known	Units	Recover%	Limits%	File
Magnesium, Total	0.507	0.500	mg/L	101	25.0 - 175	127590190

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Magnesium, Total	2406550	9.39	9.42	4.59	5.00	75.0 - 125	96.0	96.6	mg/L	0.623	25.0

* Out RPD is Relative Percent Difference: abs(r1-r2) / mean(r1,r2) * 100% Recover% is Recovery Percent: result / known * 100%

Blank - Method Blank (reagent water or other blank matrices that contains all reagents except standard(s) and is processed simultaneously with and under the same conditions as samples; carried through preparation and analytical procedures exactly like a sample; monitors); CCV - Continuing Calibration Verification (same standard used to prepare the curve; typically a mid-range concentration; verifies the continued validity of the calibration curve); MSD - Matrix Spike Duplicate (replicate of the matrix spike; same solution and amount of target analyte added to the MS is added to a third aliquot of sample; quantifies matrix bias and precision.); ICV - Initial Calibration Verification; LCS Dup - Laboratory Control Sample Duplicate (replicate LCS; analyzed when there is insufficient sample for duplicate or MSD; quantifies accuracy and precision.); MRL Check - Minimum Reporting Limit Check Std; CCB - Continuing Calibration Blank; AWRL/LOQ C - Ambient Water Reporting Limit/LOQ Check Std

Email: Kilgore.ProjectManagement@spllabs.com

1146877 CoC Print Group 001 of 001

AQUA-TECH LABORATORIES, INC.

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Bryan, TX 77807
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ATL - Austin Facility:
3512 Montopolis Drive
Austin, TX 78744
(512) 301-9559
Fax (512) 301-9552

Chain-of-Custody & Analysis Request

SHIPPED TO:
SPL-Kilgore (T104704201)
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Kilgore, TX 75662
Phone: (903) 984-0551
Fax: (903) 984-5914

C-O-C #

766 - I014372

T104704371

Page 1 of 1

All analyses must be performed by a TNI approved method certified by the TCEQ. Contact ATL's sample custodian via voice and email if your methods do not meet this criteria.

Analysis Request for:	**Sample ID: I014372-01**	Sampled: 05/07/25 09:45	Matrix: Drinking Water	Laboratory ID >> 2401671

Mg - EPA 200.7 R4.4 | Chloride - EPA 300.0 | SO4 DW - EPA 300.0

CONTAINERS SUPPLIED: (ATL indicates cooler number in parentheses for each container - only required if more than one cooler listed below.)

( ) I014372-01 [A] - [SUB] ANA Cl SO4 0.25LP

( ) I014372-01 [B] - [SUB] ANA 0.5LP HNO3 *[pH <2]*

Relinquished by: (print & sign) [X] ATL-Austin [ ] ATL - Bryan [ ] Sampler			Date	Time	[X] Iced [X] Custody Sealed [ ] Not Chilled	**Abbreviations:** DW - Drinking Water; NP - Non-Potable Water; S - Solid; CTU - Custody Transfer Unbroken; StP - Sterile Plastic; LP - Liter Plastic; LG - Liter Glass
Krstin Torres	Kristin Torres		5-8-25	1630		
Carrier & Tracking Number: Fed Ex	Cooler 1: AQU1 7704 4834 5391				Sample Info "X" all that apply	**Aqua-Tech Comments and Special Instructions**
Received by: (print & sign) [✓] Received in Lab			Date	Time	[✓] Received Iced [ ] CTU [✓] Condition Good [ ] Not Rec'd Iced	Use sample ID as PO#
McCabe Wheeler SPL, Inc.	MCC		5-9-25	1010		Need new 2010 MALs. Please J Flag metals < MRL & note all metals < MDL on reports.

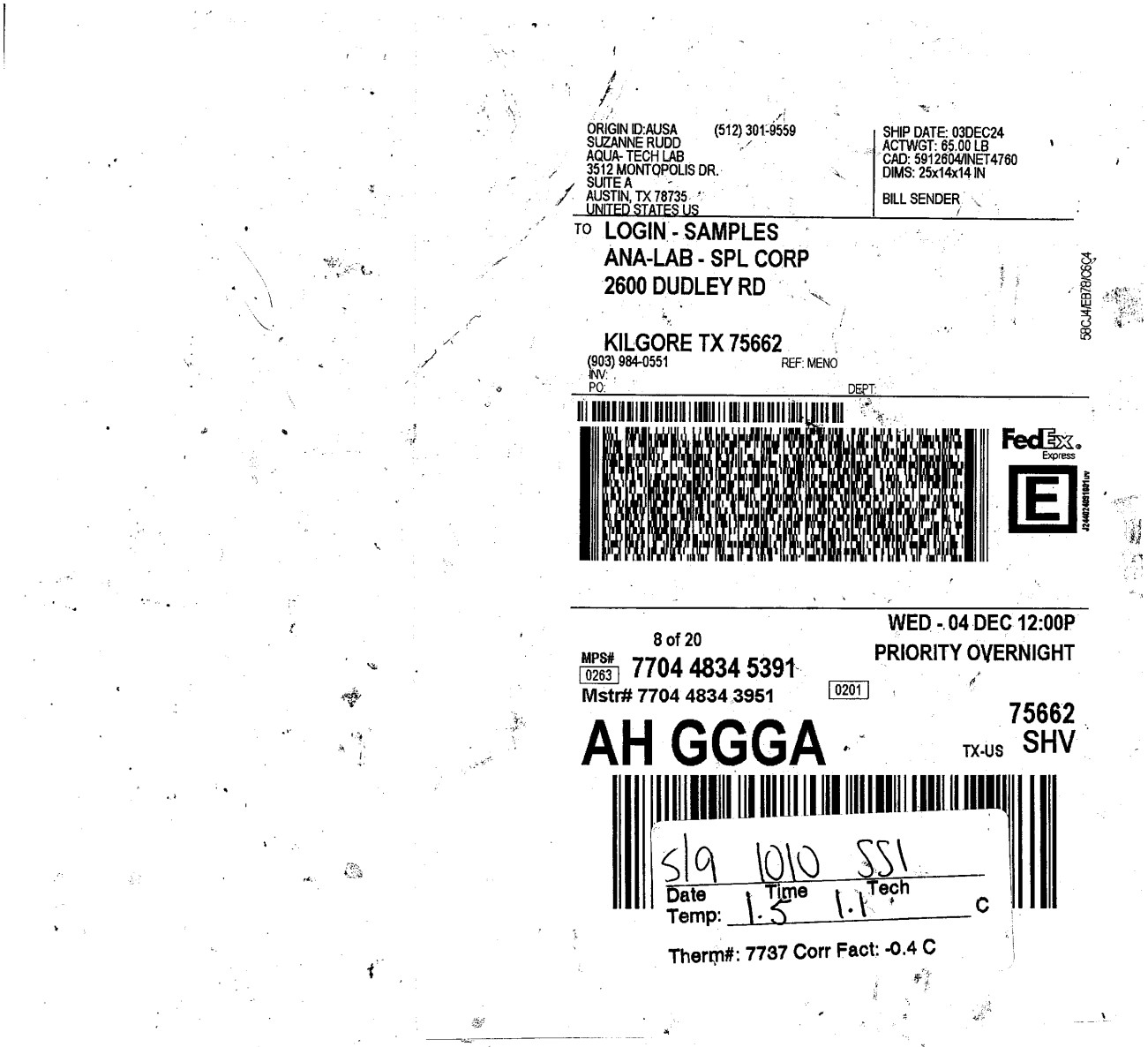
Line below documents condition at receipt in lab (shipped to) listed above.

Cooler Temperature (°C)	Temp. Read (TR)	Corrected Temp. (CT)	Thermometer ID
Cooler 1			
N/A	N/A	N/A	

Please email reports to: reporting@aqua-techlabs.com

Please return cooler(s) to: Austin Facility

Do not further sub-contract any analysis.
Keep in house or call for further instructions.



ORIGIN ID:AUSA (512) 301-9559
SUZANNE RUDD
AQUA- TECH LAB
3512 MONTOPOLIS DR.
SUITE A
AUSTIN, TX 78735
UNITED STATES US

SHIP DATE: 03DEC24
ACTWGT: 65.00 LB
CAD: 5912604/INET4760
DIMS: 25x14x14 IN

BILL SENDER

TO LOGIN - SAMPLES
ANA-LAB - SPL CORP
2600 DUDLEY RD

KILGORE TX 75662
(903) 984-0551
INV:
PO: REF: MENO
DEPT:

59CJ4/EB78/0SC4

FedEx Express

8 of 20
MPS# 0263 7704 4834 5391
Mstr# 7704 4834 3951

WED - 04 DEC 12:00P
PRIORITY OVERNIGHT

0201

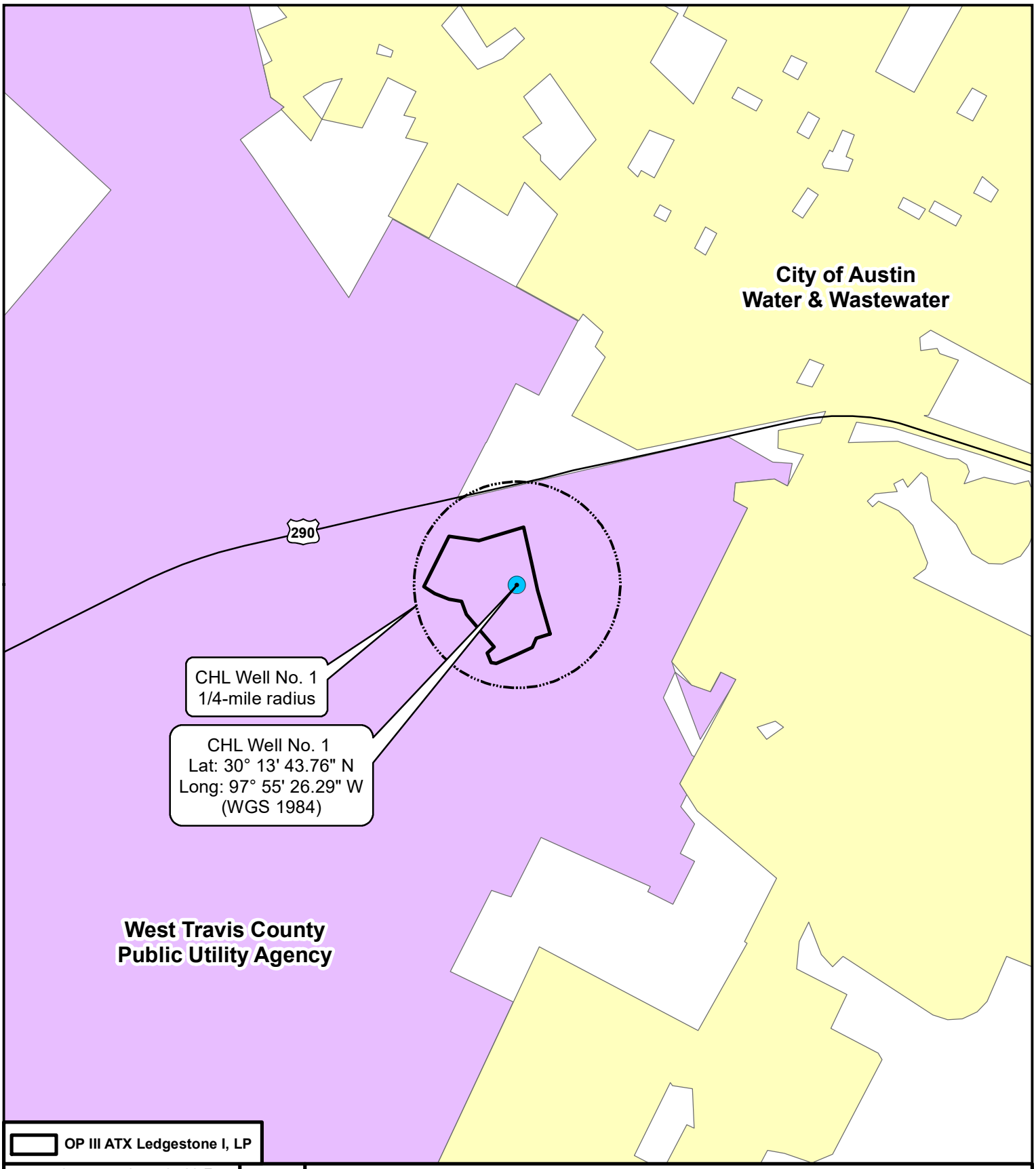
AH GGGA

75662
TX-US SHV

Date 5/9 Time 1010 Tech SS1
Temp: 1.5 1.1 C

Therm#: 7737 Corr Fact: -0.4 C

8 – Public Notice Contact List/Maps



Scale: 0 750 1,500 Feet

Drawn By: AW Date: 6-26-25

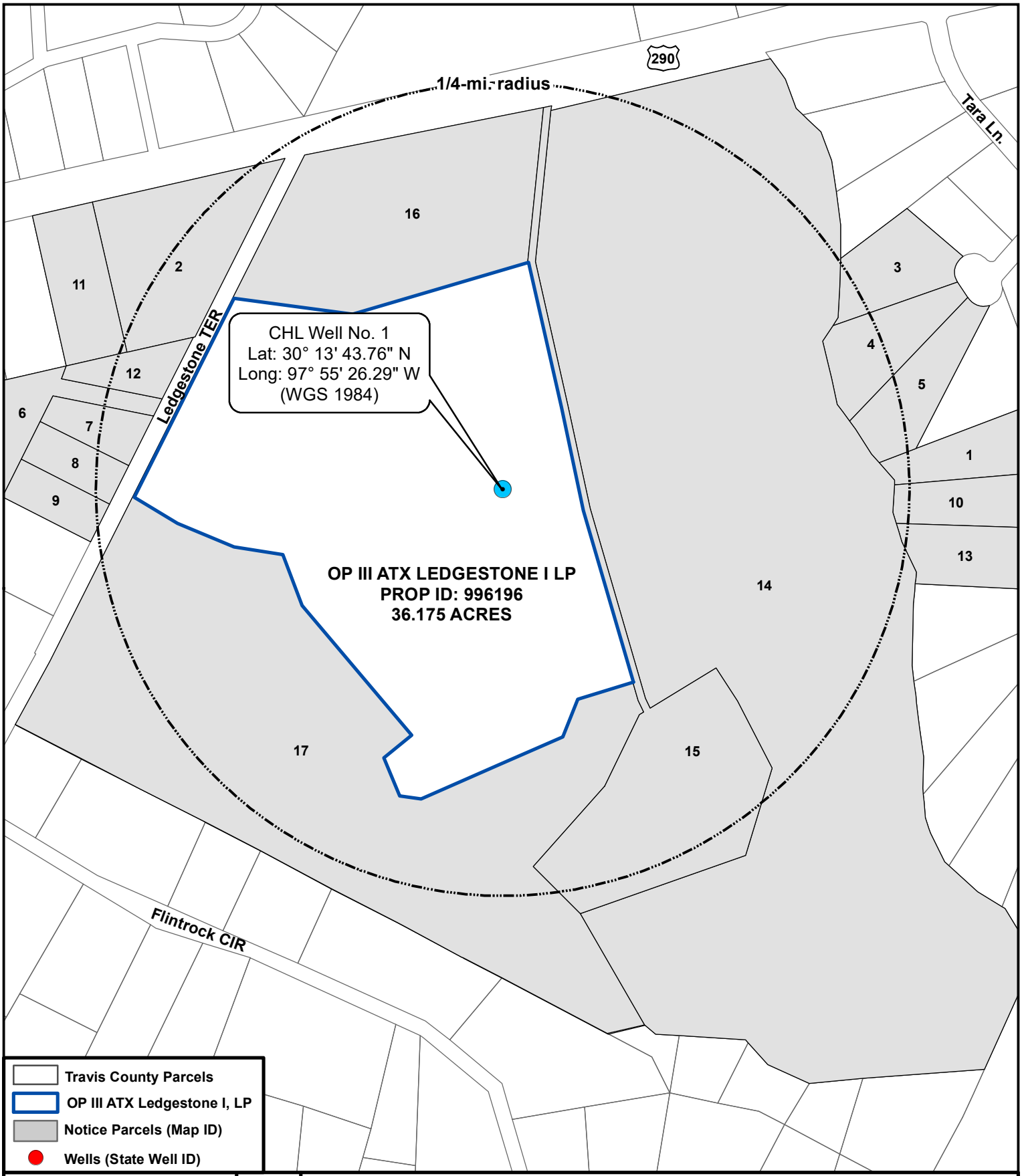
Quad Name and No:
Signal Hill, TX 30097-B8

Projection: UTM NAD 83 Z 14

Citizen House Ledgestone Well No. 1: Water Supply Notice Map

9021 West 290
Citizen House Ledgestone
OP III ATX Ledgestone I, L.P.
Travis County, Texas

Wet Rock Groundwater Services, L.L.C.
Groundwater Specialists
TBPG Firm No: 50038
317 Ranch Road 620 South, Ste. 303
Austin, Texas 78734 Ph: 512.773.3226
www.wetrockgs.com



Scale: 0 200 400 Feet

Drawn By: AW Date: 6-26-25

Quad Name and No:
Signal Hill, TX 30097-B8

Projection: UTM NAD 83 Z 14

Citizen House Ledgestone Well No. 1: Public Notice Map

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List of Public Water Suppliers within 1/4-Mile of Proposed Well

1. West Travis County Public Utility Agency
   Mailing Address: 13215 Bee Cave Pkwy, Ste B110 Austin, TX 78738-0055

2. City of Austin Water and Wastewater
   Mailing Address: PO Box 1088 Austin, TX 78767-1088

List of Property Owners within 1/4-Mile of Proposed Well

The list below was taken from the Travis County Appraisal District Database

Map ID	Property ID	Geo ID	Owner	Mailing Address
1	315467	410550109	BAHENA FRANCISCO & REYNA BAUTISTA	9000 TARA LN , AUSTIN, TX 78737
2	315492	410580312	AUSTIN HWY 290 RE LLC	12826 MURPHY RD STAFFORD TX 77477
3	315461	410550103	BONETTI LAUREN BARNES & ALEXANDER	8904 BUTLER CR , AUSTIN, TX 78737
4	315462	410550104	CARTWRIGHT JAMES EDWARD	8906 BUTLER CIR , AUSTIN, TX 78737
5	315463	410550105	JOHNSON PETER D & LENORE H	8907 BUTLER CIR , AUSTIN, TX 78737
6	315494	410580314	MODGLIN KIRK	9304 LEDGESTONE TERR , AUSTIN, TX 78737
7	315495	410580315	HUDSON CHARLES B	6004 KRAUSE LN , AUSTIN, TX 78738
8	315496	410580316	CHRON AMBER	9400 LEDGESTONE TER , AUSTIN, TX 78737
9	315497	410580317	KOHLER MARC DAVID & ANDREA BACHUS KOHLER	9404 LEDGESTONE TER, AUSTIN, TX 78737
10	315468	410550110	NICOLO MICAH J & AMANDA I	9004 TARA LN , AUSTIN, TX 78737
11	315491	410580311	9217 WEST LLC	2203 BIG HORN DR , AUSTIN, TX 78734
12	315493	410580313	MAXMILE TECHNOLOGIES LLC	10623 WINCHELSEA DR , AUSTIN, TX 78750
13	315469	410550111	MEYER HENRY WESLEY	9100 TARA LN , AUSTIN, TX 78737
14	324458	415570136	OP III ATX LEDGESTONE II LP	500 W 5TH ST STE 700 AUSTIN TX 78701
15	324461	415570139	BEGGS ROBERT K	8929 HIGHWAY 290 W , AUSTIN, TX 78736
16	996196	415570194	OP III ATX LEDGESTONE I LP	500 W 5TH ST STE 700 AUSTIN TX US 78701
17	996195	415570193	OP III ATX LEDGESTONE I TH LP	500 W 5TH ST STE 700 AUSTIN TX US 78701