CLASS VI PERMIT APPLICATION NARRATIVE
40 CFR 146.82(a)

Project Name: Tri-State CCS Buckeye 1

Facility Information

Facility Contact: Tri-State CCS, LLC
14302 FNB Parkway
Omaha, Nebraska 68154
402-691-9500

Well Locations: Carroll County, Ohio

Well Name	Latitude (WGS 84)	Longitude (WGS 84)
TB1-1	40.666280	-81.071522
TB1-2	40.645464	-81.015331
TB1-3	40.610714	-81.028986
TB1-4	40.511234	-81.025860

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Acronym List

AEP	American Electric Power
AGWQMP	Ambient Ground Water Quality Monitoring Program
AI	Acoustic Impedance
amsl	Above Mean Sea Level
Ank	Ankerite
ANSI	American National Standards Institute
ANSS	Advanced National Seismic System
ASME	American Society of Mechanical Engineers
AOI	Area of Interest
AoR	Area of Review
AP	Artificial Penetrations
API	American Petroleum Institute
ASME	American Society of Mechanical Engineers
Avg	Average
bgs	Below ground surface
BH	Bottom Hole
CarbonSAFE	Carbon Storage Assurance Facility Enterprise
CCS	Carbon Capture and Storage
CO_2	Carbon Dioxide
CI	Casing Inspection
CBL	Cement Bond Log
cc	Cubic Centimeter
COCORP	Consortium for Continental Reflection Profiling
Cr	Chromium
DAS	Distributed Acoustic Sensing
Dol	Dolomite
DTS	Distributed Temperature Sensing
DH	Downhole
EPA	Environmental Protection Agency
ERRP	Emergency and Remedial Response Plan
Fm	Formation
FR	Fragments
ft	Feet
Ga	Giga Annum

gal	Gallon
gm	Gram
GR	Gamma Ray
Grp	Group
GS	Geologic Sequestration
GSDT	Geologic Sequestration Data Tool
gm	Gram
H_2S	Hydrogen Sulfide
K	Potassium
KIC	Knox Injection Complex
KY	Kentucky
lb	pound
LIC	Lockport Injection Complex
Ls	Limestone
M	Magnitude
Ma	Mega Annum
MD	Measured Depth
md	Millidarcy
MIT	Mechanical Integrity Test
MIC	Medina Injection Complex
MMI	Modified Mercalli Intensity
MMt	Million Metric Tonnes
MMt/y	Millions of Metric Tonnes per year
Mt/y	Thousand Metric Tonnes per year
NACE	National Association of Corrosion Engineers
NEPA	National Environmental Policy Act
NY	New York
OEPA	Ohio Environmental Protection Agency
ODNR	Ohio Department of Natural Resources
OD	Outer Diameter
OH	Ohio
OSU	Ohio State University
ppmv	Parts Per Million Volume
PA	Pennsylvania
PEF	Photoelectric Factor
phi	Krumbein phi Scale (porosity)
mol%	Percentage of total moles in a mixture made up by one constituent
PISC	Post-Injection Site Care
psi	Pounds Per Square Inch
psia	Pounds Per Square Inch, Absolute

psig	Pound Force Per Square Inch
P/T	Pressure-Temperature
PNC	Pulsed Neutron Capture
QASP	Quality Assurance and Surveillance Plan
QFL	Quartz-Feldspar-Lithic
QmFLt	Microcrystalline Quartz-Feldspar-Lithic
RC	Reflection Coefficient
RCRA	Resource Conservation and Recovery Act
RHOB	Bulk Density
RSWC	Rotary Sidewall Core
SAPT	Standard Annulus Pressure Test
Sco2	Supercritical CO2
SIC	Standard Industrial Classification
SLB	Schlumberger
SP	Spontaneous Potential
spar	Sparite
SSTVD	Sub-Sea True Vertical Depth
strat	Stratigraphic
SU	Stratigraphic Unit
TN	Tennessee
TD	Total Depth
TDS	Total Dissolved Solids
TRI	Toxic Release Inventory
TST	Transgressive System Tract
TVD	Total Vertical Depth
TWT	Two-Way Time
UIC	Underground Injection Control
undiff	Undifferentiated
USACE	U.S. Army Corps of Engineers
USDW	Underground Source of Drinking Water
U.S. EPA	U.S. Environmental Protection Agency
USGS	United States Geologic Survey
VOC	Volatile Organic Compounds
VSP	Vertical Seismic Profile
VA	Virginia
WGS	World Geodetic System
WV	West Virginia
WVGES	West Virginia Geological and Economic Survey
XRD	X-Ray Diffraction

1. Project Background and Contact Information

Tri-State CCS, LLC is proposing the development of an industrial scale carbon capture and storage (CCS) hub in the tri-state region of Ohio (OH), Pennsylvania (PA), and West Virginia (WV) (Figure 1). The Tri-State CCS Hub envisions the development of several CO_2 injection wells with the capability of storing about 150-million metric tonnes (MMt) with injection taking place over 30 years. The hub was selected by the U.S. Department of Energy to receive Phase III funding under the Carbon Storage Assurance Facility Enterprise (CarbonSAFE) Initiative. Partners include the Southern States Energy Board (the Prime Recipient), Tenaska Sequestration Services, LLC, Projeo Corporation, Ohio State University, West Virginia Geological and Economic Survey, and West Virginia University.

Tri-State CCS, LLC is developing a series of CO_2 injection fields, known as the Tri-State CCS Hub, that will provide the region's emitters with a safe and secure subsurface storage solution. Nine separate emitters, reporting more than 20 million metric tonnes per year (MMt/y) of aggregate CO_2 emissions, have indicated their support for this project. These sources include AEP Dresden (1.9 MMt/y), AEP Mountaineer (9.2 MMt/y), Carroll County Energy (2.0 MMt/y), Ergon West Virginia (0.2 MMt/y), Hill Top Energy Center (1.5 MMt/y), Lakeview Energy (0.16 MMt/y), LS Power – Springdale (2.0 MMt/y), Southfield Energy (3.0 MMt/y), and Westmoreland Energy (2.8 MMt/y).

This narrative in support of a Class VI Underground Injection Control (UIC) permit application covers Tri-State CCS Buckeye 1 in Carroll County, Ohio (the "project"), which is a subset of the Tri-State CCS Hub. The project proposes development and operation of four injection wells (TB1-1, TB1-2, TB1-3, and TB1-4), four in-zone observation wells (TB1-IOB-1, TB1-IOB-2, TB1-IOB-3, and TB1-IOB-4), three above zone observation wells (TB1-AOB-1, TB1-AOB-2, and TB1-AOB-3), four lowermost underground source of drinking water (USDW) observation wells (TB1-UOB-1, TB1-UOB-2, TB1-UOB-3, and TB1-UOB-4), and four groundwater observation wells (TB1-GW-1, TB1-GW-2, TB1-GW-3, and TB1-GW-4) that will be drilled on the well pads for the injection wells (Figure 2). This Application Narrative is for proposed wells TB1-1, TB1-2, TB1-3, and TB1-4.

Tri-State CCS, LLC is an affiliate of Tenaska, Inc. (Tenaska) who has made major, corporate-level commitments toward the development of the hub. Tenaska is a privately held, independent power company based in Omaha, Nebraska. Established in 1987, Tenaska has a generating fleet of over 7,500 MW, is one of the largest gas marketing companies in North America and has balance sheet equity of $2.9 billion. Tri-State CCS, LLC will serve as the hub owner and will assume liability for development, finance, and operation of the hub.

The key project contacts are:

Claimed as PBI [redacted]
Tri-State CCS, LLC
14302 FNB Parkway
Omaha, Nebraska 68154
Claimed as PBI [redacted]

Claimed as PBI [redacted]
Projeo Corporation
1700 S Mount Prospect Rd.
Des Plaines, Illinois 60018
Claimed as PBI [redacted]

The supporting documentation for this application was prepared in accordance with the U.S. Environmental Protection Agency's (U.S. EPA's) UIC Control Program for Carbon Dioxide Geologic Sequestration Wells codified at 40 CFR 146.

With this application, Tri-State CCS, LLC is requesting permits to construct for TB1-1, TB1-2, TB1-3, and TB1-4. After issuance of the permits by the UIC Program Director, Tri-State CCS, LLC plans to start construction of the injection wells within 2 years but additionally requests two options to extend the permit term by 2 years. The reason for this request is that the project relies on the installation of capture equipment at the emitter and construction of pipeline infrastructure to the emitter, both of which may be delayed for reasons outside the control of Tri-State CCS, LLC. After submittal of required documentation to the UIC Program Director and receiving authorization to inject and once the emitter is ready to operate their CO_2 capture equipment, Tri-State CCS, LLC will initiate injection. This application assumes that the 60-year injection period will start in approximately 2027, end in 2087, and be followed by a 50-year post-injection site care (PISC) period, taking the project to 2137. Start of injections could vary by 1 to 5 years.

The project is not requesting an injection depth waiver or an expansion of aquifer exemptions with this application.

There are no federally recognized Native American tribal lands or territories within the proposed Area of Review (AoR; 40 CFR 146.82(a)(20)).

The SIC codes applicable to the project are identified below (40 CFR 144.31(e)(3)):

- 49530300 Nonhazardous waste disposal sites – primarily engaged in collection and disposal of refuse by processing or destruction or in operation of incinerators/waste treatment plants/landfills/other sites for disposal of such materials;
- 51690203 Carbon Dioxide – primarily engaged in wholesale distribution of CO_2; and
- 4619 Pipelines, not elsewhere classified – primarily engaged in pipeline transportation of commodities except petroleum and natural gas.

State contacts with jurisdictions within the proposed AoR include the following (40 CFR 146.82(a)(20)):

Ohio Department of Natural Resources (ODNR; Class II UIC and stratigraphic wells)
Division of Oil & Gas Resources
2045 Morse Road, Columbus, OH 43229
Kenny Brown: 614-265-6933, michael.brown@dnr.state.ohio.us

Ohio Environmental Protection Agency (OEPA; Class I, IV, and V UIC wells)
Division of Drinking and Ground Waters, Underground Injection Control Program
P.O. Box 1049, Columbus, OH 43216-1049
Lindsay Taliaferro: 614-644-2771, l.taliaferro@epa.ohio.gov

The permits and authorizations that will likely be required for the project, the permit/authorization jurisdictions, and the associated project development activities are provided in Table 1 (40 CFR 144.31(e)(6)).

Table 1: Permits and authorizations necessary for development of the project.

Required Permits and Authorizations for Carroll County, Ohio		
Permit/Authorization	**Activity**	**Jurisdiction**
UIC Class VI Permit to Construct	Drilling of Injection Wells	U.S. EPA
UIC Class VI Authorization to Inject	Injecting CO_2	U.S. EPA
Greenhouse Gas Rule Subpart RR Monitoring, Reporting, and Verification Plan Approval	Injecting CO_2	U.S. EPA
Section 404 Nationwide Permit	Temporary impacts to federal jurisdictional waters	USACE
Isolated Wetlands Permit	Temporary impacts to waters that do not have federal jurisdiction	OEPA
Construction Stormwater General Permit	Management of stormwater during construction	OEPA
Drilling Permit	Observation well construction	ODNR

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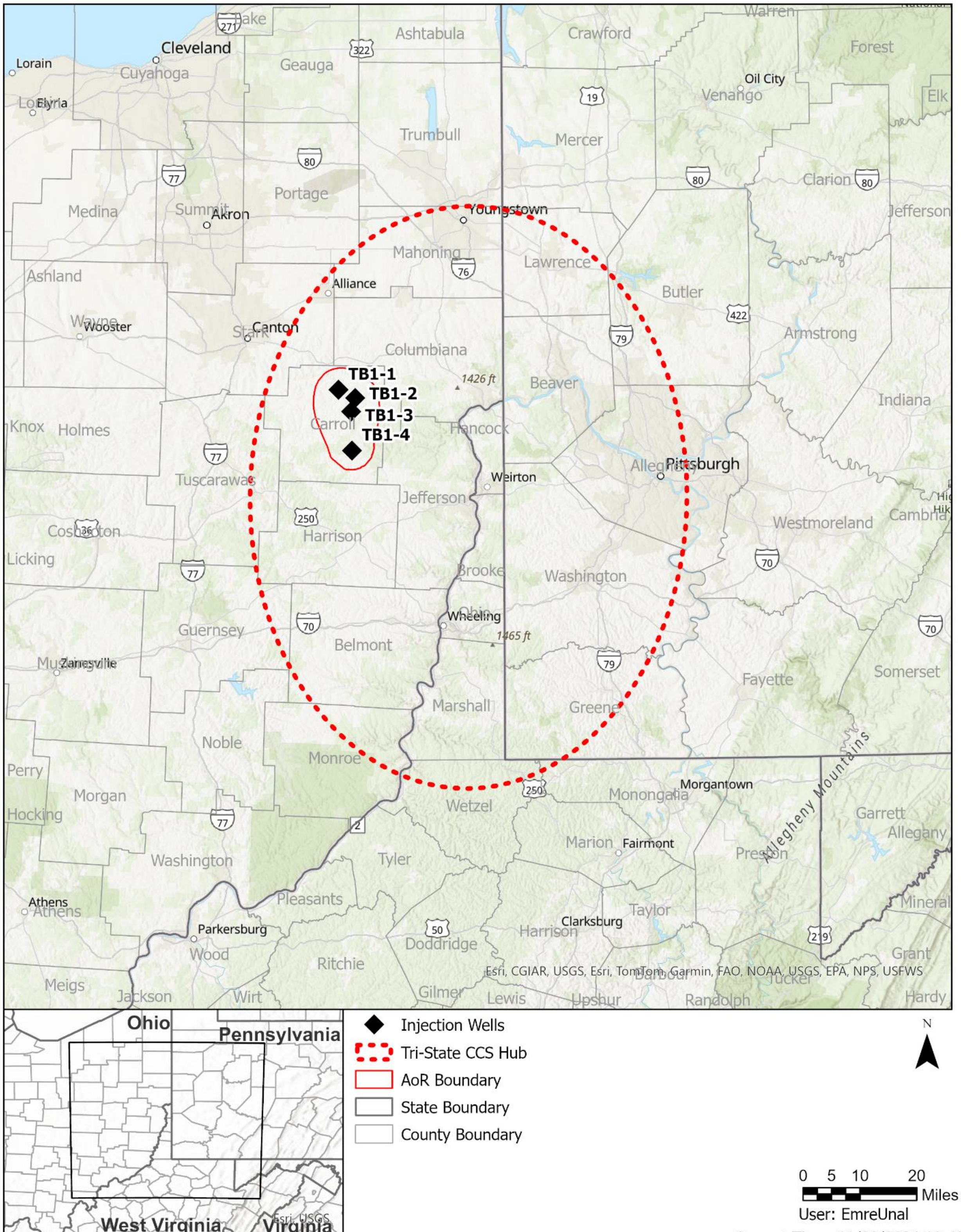

Figure 1: Location of Tri-State CCS Hub and AoR boundary with Carroll County injection well locations.

The project is currently proposing an AoR that includes a 1-mile buffer on the modeled maximum extent of the pressure front to mitigate the current unknowns in subsurface data that will be resolved with the planned CarbonSAFE stratigraphic test wells and pre-operational testing. These unknowns are discussed, along with the pressure front and plume development for each injection complex, in the Application Narrative and in the Area of Review and Corrective Action Plan. To address the federal requirements at 40 CFR 146.82(a)(2) for a map of the area, features are shown or noted as absent below:

- Injection wells: There are no records of currently active injection wells in the AoR.
- Oil and gas wells (Figure 3; further discussed in subsection 4.1 of the Area of Review and Corrective Action Plan) (source: ODNR):

  Rose Run (20 wells in total):
    - Producing: There are 6 known producing wells (Utica Shale, Point Pleasant, Black River Group, Trenton Limestone and Rose Run Sandstone) with “gas” and “oil and gas” status in the AoR.
    - Plugged and Abandoned: There are 3 known wells with “plugged oil”, “dry hole” and “dry hole with gas show” status in the AoR.
    - Strat Test: There are 10 known wells with “strat test” status in the AoR.
    - Planned Well: There is one well with “planned well” status in the AoR.

  Medina (408 wells in total):
    - Producing: There are 361 known producing wells (Clinton Sand, Point Pleasant and Utica Shale) with “oil and gas”, “oil”, “gas with oil show”, “oil with gas show” and “gas” status in the AoR.
    - Plugged and Abandoned: There are 36 known wells with “plugged oil and gas”, “dry hole”, “plugged oil”, “plugged oil with gas show”, “dry hole with gas show”, “plugged gas with oil show” and “plugged gas” status in the AoR.
    - Strat Test: There are 6 known wells with “strat test” test in the AoR.
    - Planned Well: There are 4 wells with “planned well” status in the AoR
    - Others: There is one well with “oil and gas converted to water” status in the AoR.
- Water wells: There are 3,294 known water wells in the AoR, as shown in Figure 4 (see subsection 2.7.3 below for discussion).
- Roads and railroads: State Highways 9, 39, 43, and 171, various county and town roads, and two railways are in the AoR, as shown in Figure 3 and Figure 4.
- State or U.S. EPA-approved subsurface cleanup sites (Figure 5):
    - LRC Surety Property, 271 5th Street, Carrollton, Carroll County, Ohio (OEPA Project ID 210002612002; in the AoR) – This 4.58-acre industrial property is part of OEPA’s Voluntary Action Program. Historical use was manufacturing of pottery, batteries, and rubber gloves. Remedial activities were removal of 32 cubic yards of non-hazardous soil. A Covenant Not to Sue was issued by OEPA in 2009 which is a legal release that no more cleanup is needed at the property.
    - COLFOR MANUFACTURING INC, 3255 Alliance Road NW, Malvern, Ohio (U.S. EPA RCRA ID OHD000816678; 1.15 miles northwest of AoR) -- This facility is listed in U.S. EPA’s RCRA Info as a corrective action hazardous waste cleanup site. The facility is used for iron and steel forging. Human exposure and groundwater migration were considered to be under control in 2008, a Remedy

Decision was made in 2009, and the site was determined to be ready for anticipated use in 2009. The corrective action process was terminated in 2009 with no further action needed.

- MINERVA PROPERTY HOLDINGS LLC, 217 Roosevelt Street, Minerva, Ohio (U.S. EPA RCRA ID OHD004449427; 0.72 miles north of AoR) – This facility is listed in U.S. EPA's RCRAInfo as a corrective action hazardous waste cleanup site. A Remedy Decision was made in 2005, with human exposure and groundwater migration under control in 2009, and the site was determined to be ready for anticipated use in 2018. The corrective action process remains open for the site.
- TRW, INC. (MINERVA PLANT), 3860 Union Ave S, Minerva, Ohio (U.S. EPA ID OHD004179339; 1.8 miles north of AoR) – This 135-acre industrial site was listed on U.S. EPA's National Priorities List in 1989; the listing includes a 285-acre study area that extends into a residential area of Minerva. Historically, the industrial site included a plant that housed a metal casting operation. Degreasers containing volatile organic compounds were discharged to a ditch and contaminated soil and groundwater at the site. Cleanup and monitoring at the site have been ongoing since 1986 and include a pump and treat system for groundwater. Groundwater contamination levels at the site have steadily decreased, and the site is currently in the Remedial Investigation phase.

- Other pertinent surface features and townships: the village/municipality of Carrollton, many smaller size communities and neighborhoods, and townships of Augusta, Brown, East, Harrison, Washington, Center, Fox, Union, Lee, Perry and Loudon are in the AoR, as shown in Figure 2.
- Surface bodies of water: The following named surface bodies of water are in the mapped area, as shown in Figure 3 and Figure 4: Camp Conestoga Lake, Woheld Lake, Tennessee Gas Lake, Camp Echo Lake, France Lake, Kilgore Lake, Wholebark Run, Pumpkin Run, Pipe Run, Cold Spring Run, Reeds Run, Trail Run, Honey Run, Frog Run, Strawcamp Run, Indian Fork Creek, Still Fork, Dining Fork, Muddy Fork, Town Creek, Elkhorn Creek, Yevrus Creek, Gault Creek, Friday Creek, North Fork McGuire Creek, Center Fork of Elkhorn Creek, and Long Creek. There are various unnamed tributaries and ponds in the AoR as well.
- Springs: There are 27 records of unconfirmed springs in the mapped area (Figure 3). Data was uploaded from ODNR, and the GIS layer is named 'unconfirmed spring locations'.
- Quarries: There are 2 records of historic quarries in the AoR (Figure 6).
- State, tribal, and territory boundaries: There are no tribal or territory boundaries in the AoR.
- Surface and subsurface mines: There are surface and subsurface (underground) coal mines and industrial minerals surface mines as well as historic surface mines in the AoR. Mining operations in the mapped area are shown in Figure 6 and further discussed in subsection 2.1.10 below.

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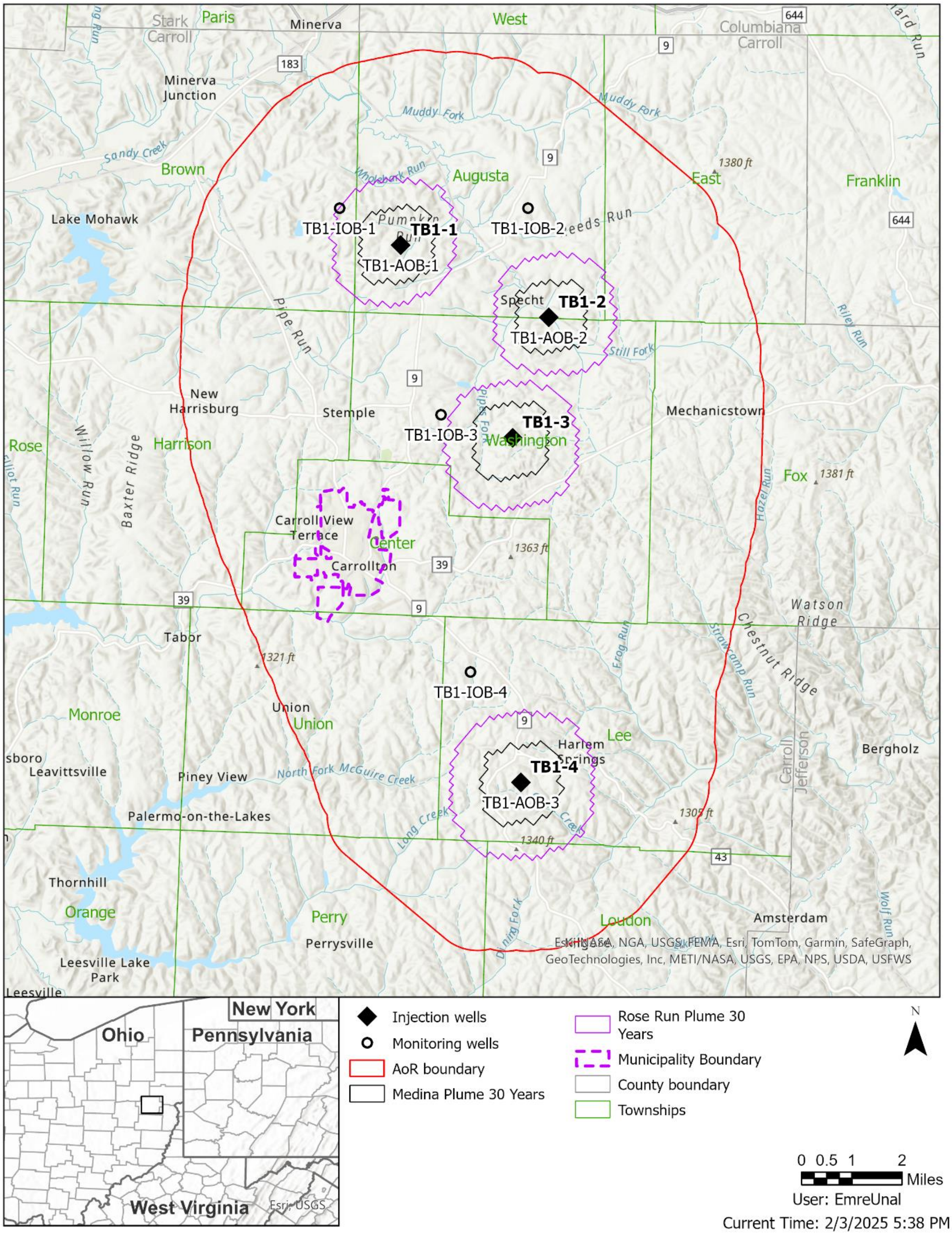

Figure 2: Locations of proposed injection and observation wells, the AoR, at the end of injection for the KIC and the MIC (30-year plume boundary).

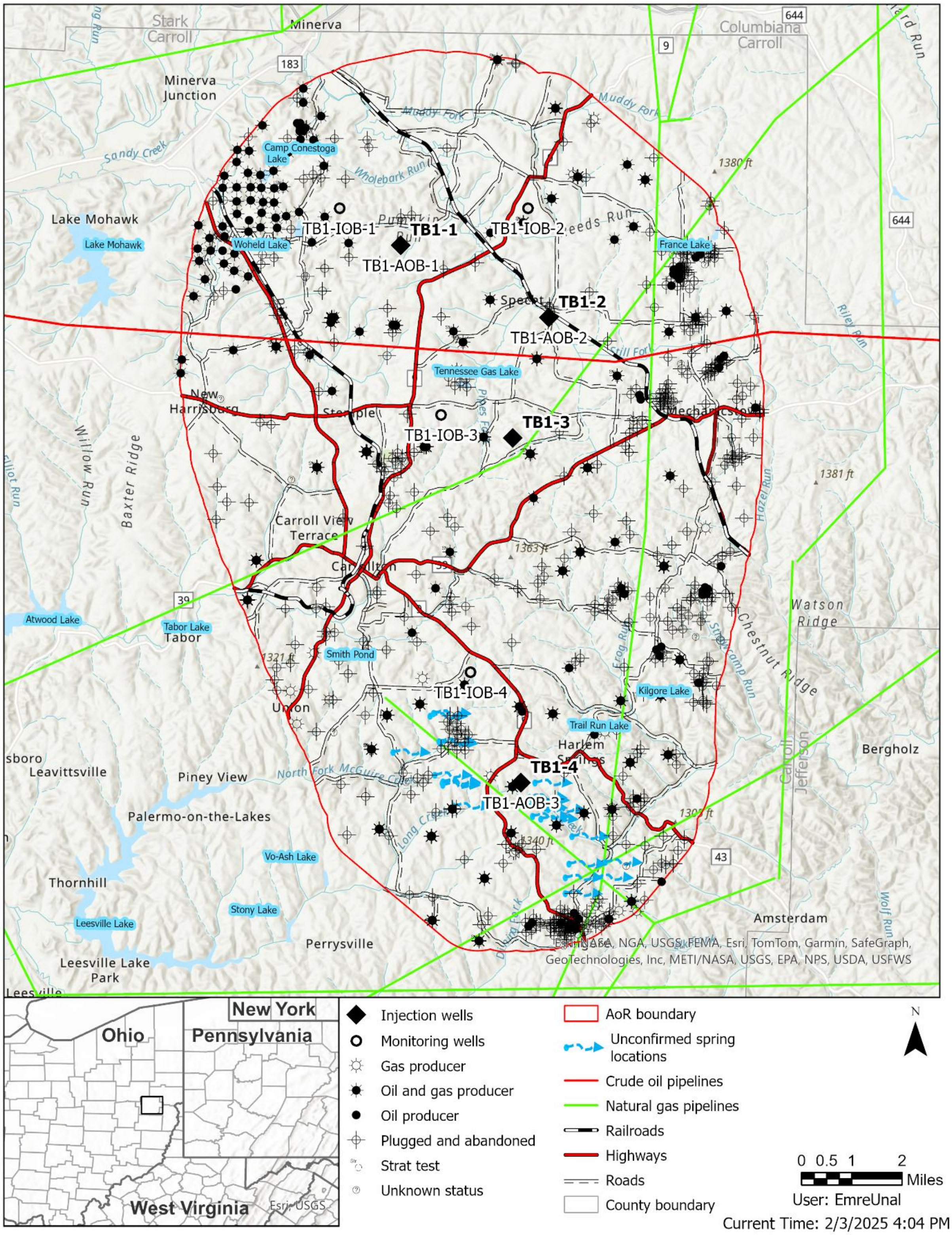

Figure 3: Locations of proposed injection and observation wells, oil and gas wells, infrastructure, lakes, water bodies and unconfirmed spring locations.

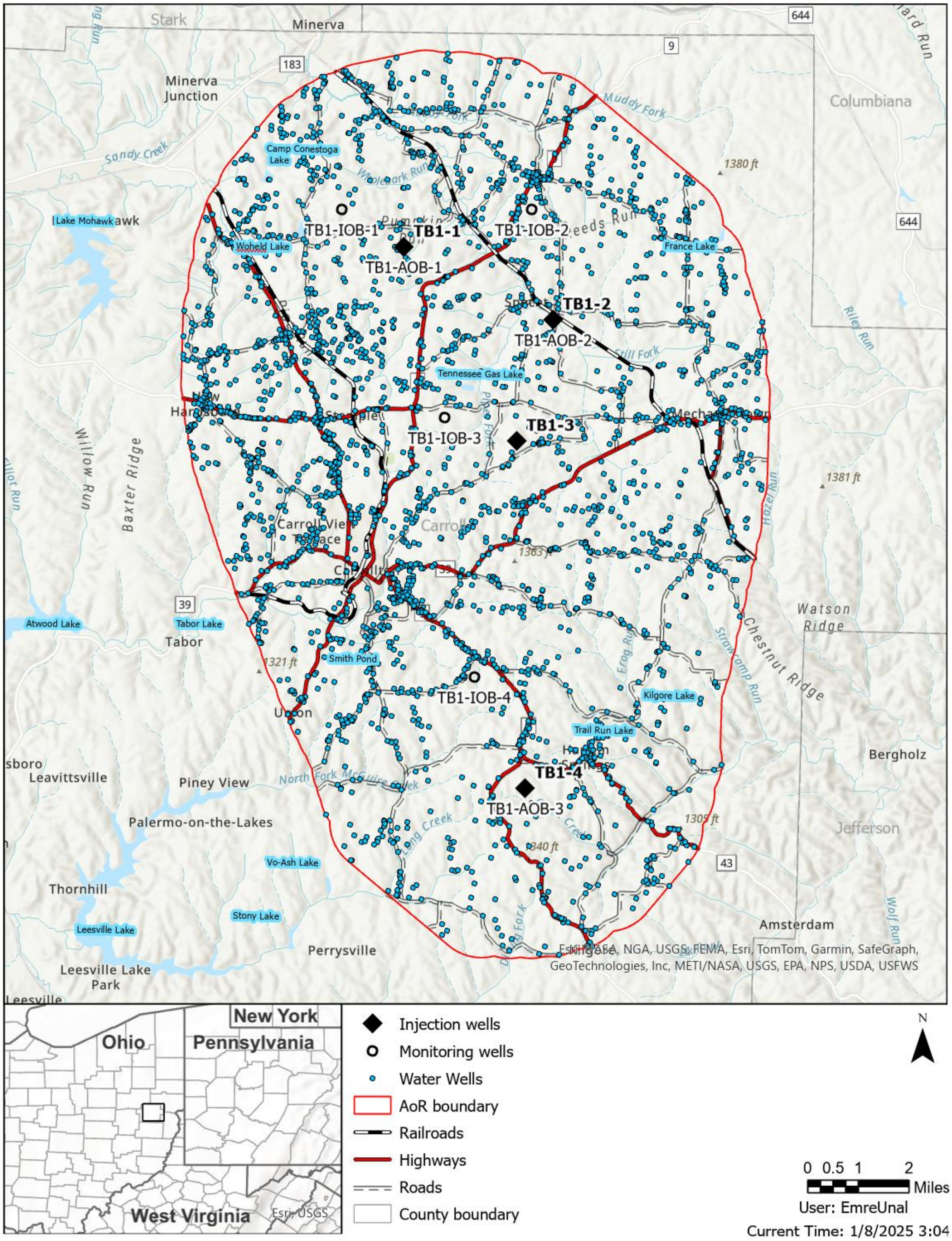

Figure 4: Locations of proposed injection and observation wells, water wells, infrastructure, lakes and water bodies.

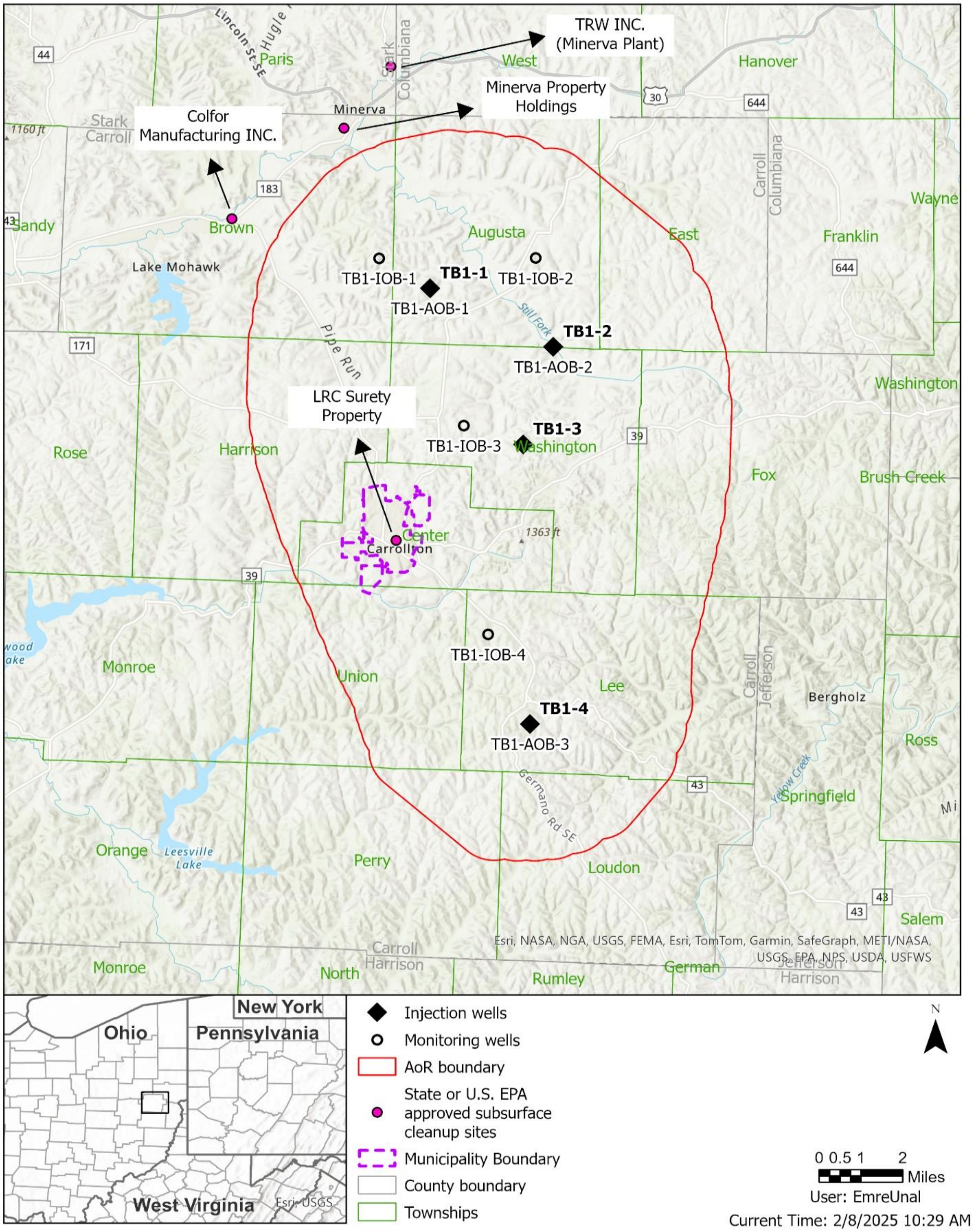

Figure 5: Locations of proposed injection and monitoring wells, state or U.S. EPA approved subsurface cleanup sites in and outside the AoR.

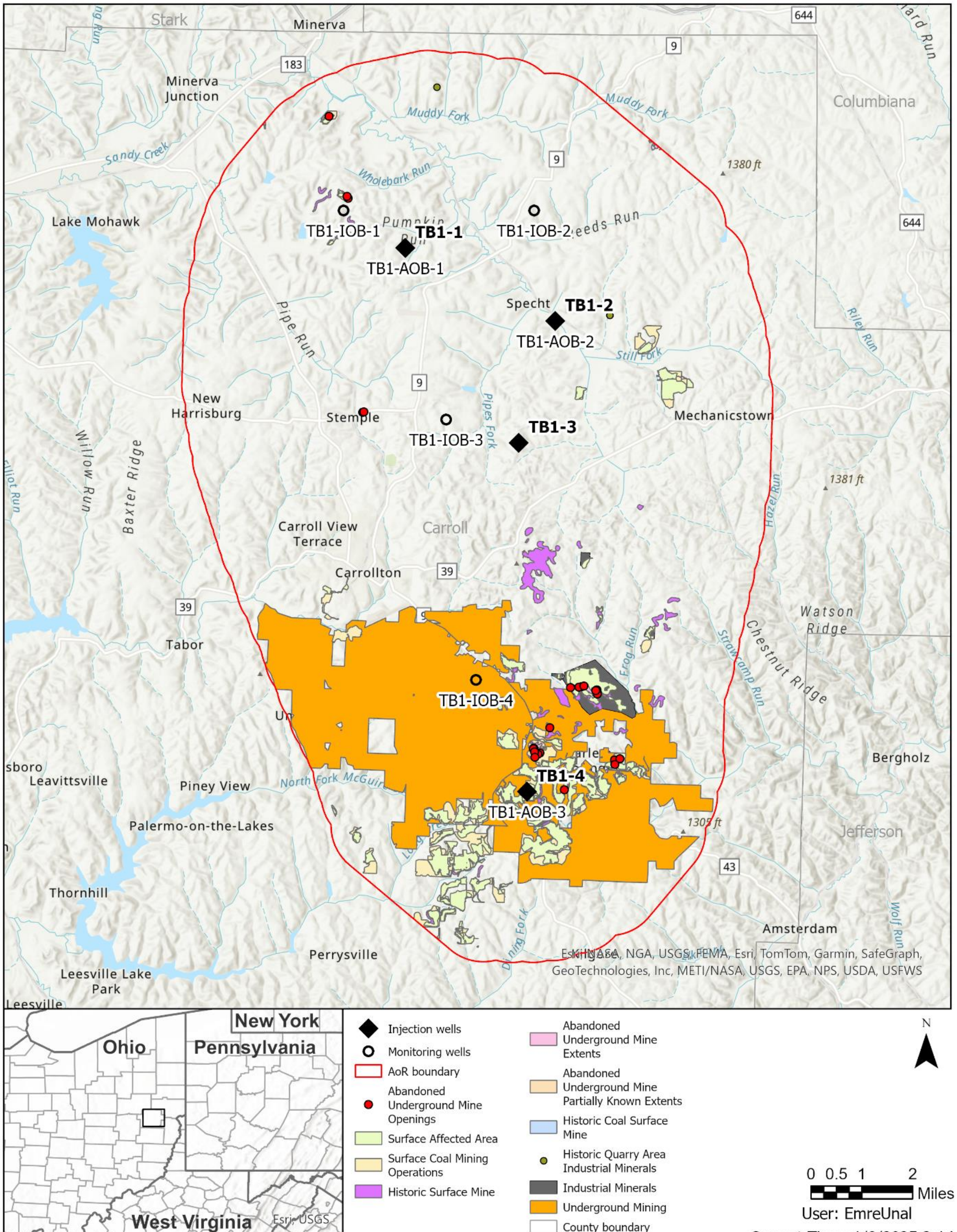

Figure 6: Mining and industrial minerals near proposed injection and observation wells.

2. Site Characterization

2.1. Regional Geology, Hydrogeology, and Local Structural Geology [40 CFR 146.82(a)(3)(vi)]

2.1.1. Geographic Overview

The Tri-State CCS Hub is located within the tri-state region of eastern Ohio, northern West Virginia, and western Pennsylvania. This region lies within the Appalachian Basin, an elongate, retroarc foreland basin that sits within the physiographic province of the Appalachian Plateau (Figure 7). The Appalachian Basin extends approximately 1,270 miles from Canada to Alabama and is flanked by the Cincinnati, Findlay, Nashville Dome and Algonquin arches to the west, and the Blue Ridge Mountains and the New England Uplands to the east (Colton, 1970). The northern boundary of the basin is demarcated by the Laurentian and Frontenac arches of the Canadian Shield (Ettensohn, 2008), while to the south, the basin transitions into the Black Warrior Basin of northwestern Alabama and northeastern Mississippi (Figure 7).

2.1.2. Tectonic History

The Appalachian Basin developed as a result of flexurally driven subsidence caused by tectonic loading from four nearly continous orogenic events throughout the Paleozoic. Orogenic development related to the Applachian Basin began in the Early-Middle Ordovician (~472 Ma) and continued for almost 200 Ma until the Late Permian (Ettensohn, 2008). The orogenies include the Taconic (or Taconian), the Salinic, the Acadian, and the Alleghanian tectophase orogenic cycles. These orogenies can be grouped into two higher-order supercycle phases related to continetal collision and plate convergence with the Taconic and Salinic orogenies included in the Caledonian orogenic phase and the Acadian and Alleghanian orogenies included in the Variscan-Hercynian orogenic phase (Figure 8).

The Caledonian orogenic phase is a result of the Ordovician to Early Devonian closure of the Iapetus Ocean that formed the continent of Laurussia through the collision of the continents of Laurentia, Baltica, and the Avalonian microcontinent (Kearey et al., 2009; Torsvik and Cocks, 2016).

The Variscan-Hercynian orogenic event occurred during the Middle Devonian–Permian, as the Theic Ocean closed, and continental collision between Laurussia and Gondwana formed the supercontinent of Pangaea (Kearey et al., 2009; Ziegler, 2012; Torsvik and Cocks, 2016).

2.1.3. Influence of Precambrian – Cambrian Tectonic Events

The Paleozoic development of the Appalachian Foreland Basin was heavily influenced by Precambrian-Cambrian age tectonic events. The basement rocks that underlie the basin mainly comprise Grenvillian age crust (1.35–0.95 Ga, Figure 9) that were deformed and metamorphosed during the Grenville orogeny as the supercontinent Rodinia was formed (Ettensohn, 2008). Portions of the Grenville crust have been uplifted and deformed through Paleozoic orogenic events and are exposed at the surface in both the Blue Ridge physiographic province and the Adirondack dome (Figure 7).

Late Precambrian-Cambrian rifting and volcanism occurred during the separation of Laurentia from Gondwana and the formation of the Iapetus, Theic, and Rheic Oceans (Kearey et al., 2009; Torsvik and Cocks, 2016). Inboard rifting resulted in the deposition and emplacement of time-equivalent sedimentary and volcanic rocks (Figure 9) along what are currently the physiographic provinces of the Blue Ridge and Valley and Ridge (Figure 9, Ettensohn, 2008).

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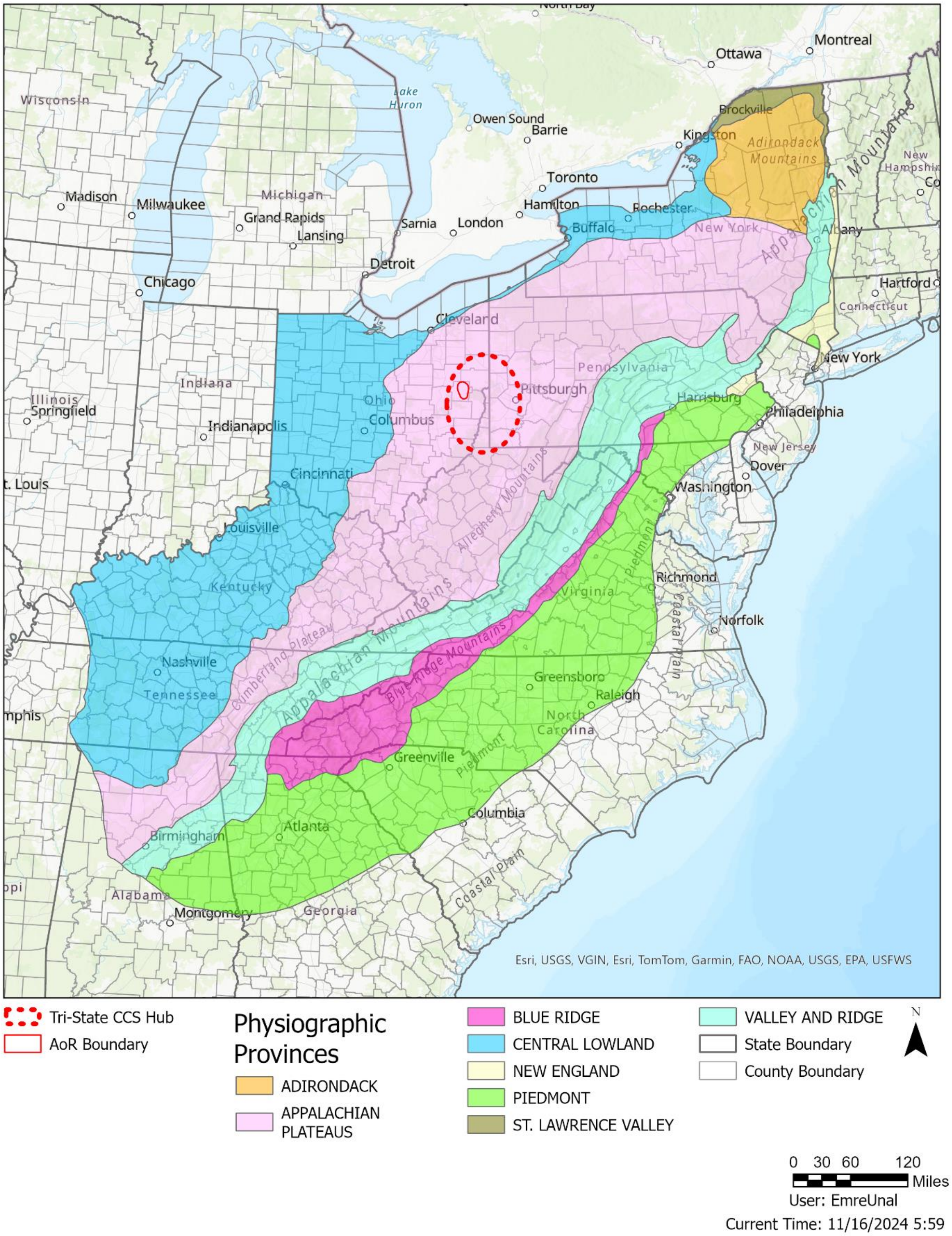

Figure 7: Physiographic provinces of the Appalachian Highlands after Fenneman, 1928. The Tri-State CCS Hub location is indicated with a red dashed circle, with the project's AoR boundary in red within it.

Rifting was followed by a period of stabilization across the margin, relative sea level rise, and thermally driven subsidence of the basin that resulted in the widespread deposition of Precambrian-Early Cambrian synrift siliciclastic sediments (Colton, 1970). During the Late Cambrian, continued submergence of the platform established the "Great American Carbonate Bank", depositing up to 3,000 ft of mixed limestone, dolostone, and minor siliciclastic sediment (Figure 9; Demicco and Mitchell, 1982).

2.1.4. Early Ordovician

The Late Cambrian post-rift passive margin phase continued into the Early Ordovician as sedimentation and carbonate development continued across the passive margin (Figure 8 and Figure 9). The near equatorial paleogeographic setting and aridification of the climate, during the Early Ordovician, resulted in the uninterrupted deposition of carbonates, dolomites, and sedimentary strata of the Knox Group (Figure 9; Read, 1989; Scotese, 2003; Ettensohn, 2008).

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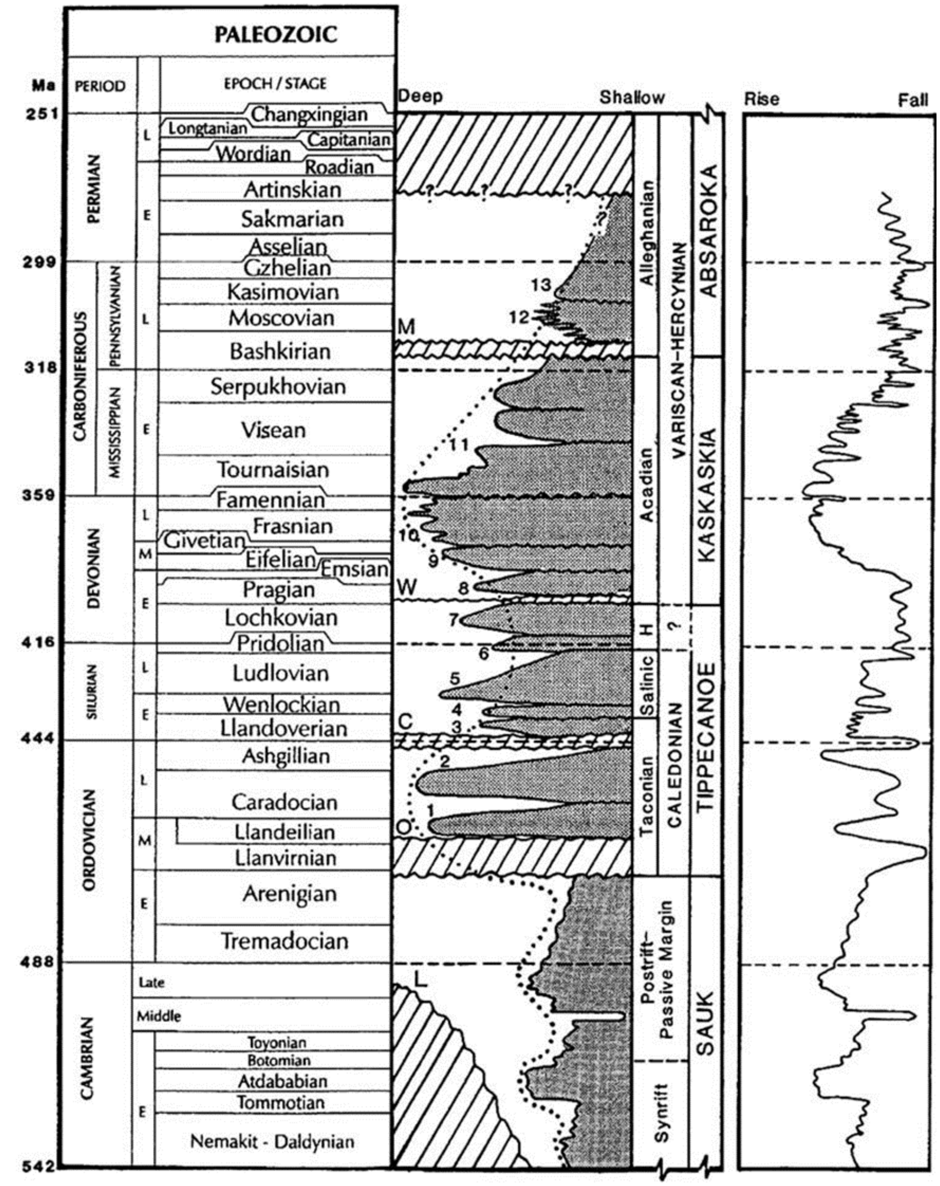

Figure 8: Paleozoic geologic time scale, showing the occurrence and relative duration of synrift, postrift passive margin, and 13 third-order, tectophase cycles (numbered) in the Appalachian Basin as a relative sea-level curve, compared with generalized sea-level curve (modified from Ross and Ross, 1988; Read, 1989; and Dennison, 1989). Unconformities are labeled on the sea-level curve: L, Lipalian; O, Owl Creek (Knox); C, Cherokee; W, Wallbridge; and M, Monday Creek. (Figure from Ettensohn, 2008).

2.1.5. <u>Ordovician-Silurian Caledonian Orogeny</u>

Syn- and post-rift sedimentation is observed from the Late Precambrian through the Ordovician. Precambrian Grenville age basement rocks, the influence of Iapetan rifting, and the development of the Rome Trough is visible at the base of the stratigraphic section, seen in Figure 9. The transition from the Early to Middle Ordovician period, is stratigraphically delineated by the Knox (Owl Creek) unconformity which is present between the top of the Knox Group and the base of the Black River-Trenton limestone stratigraphic units (Figure 9). The unconformity was formed as a result of tectonic loading and thermally driven subsidence related to the onset of Caledonian (Taconian/Taconic orogenic phase) orogenesis (Figure 8 and Figure 9; Ettensohn, 2008; Ziegler, 1989). This shift to a protracted period of mountain building and subsequent foreland basin development is reflected in the deposition of a thick and diverse assemblage of basinal sediments (Figure 9), with an expansion of sedimentary units across the basin as the foredeep of the basin progressively translates from the present-day southeast to the northwest (Figure 9 from Ettensohn, 2008).

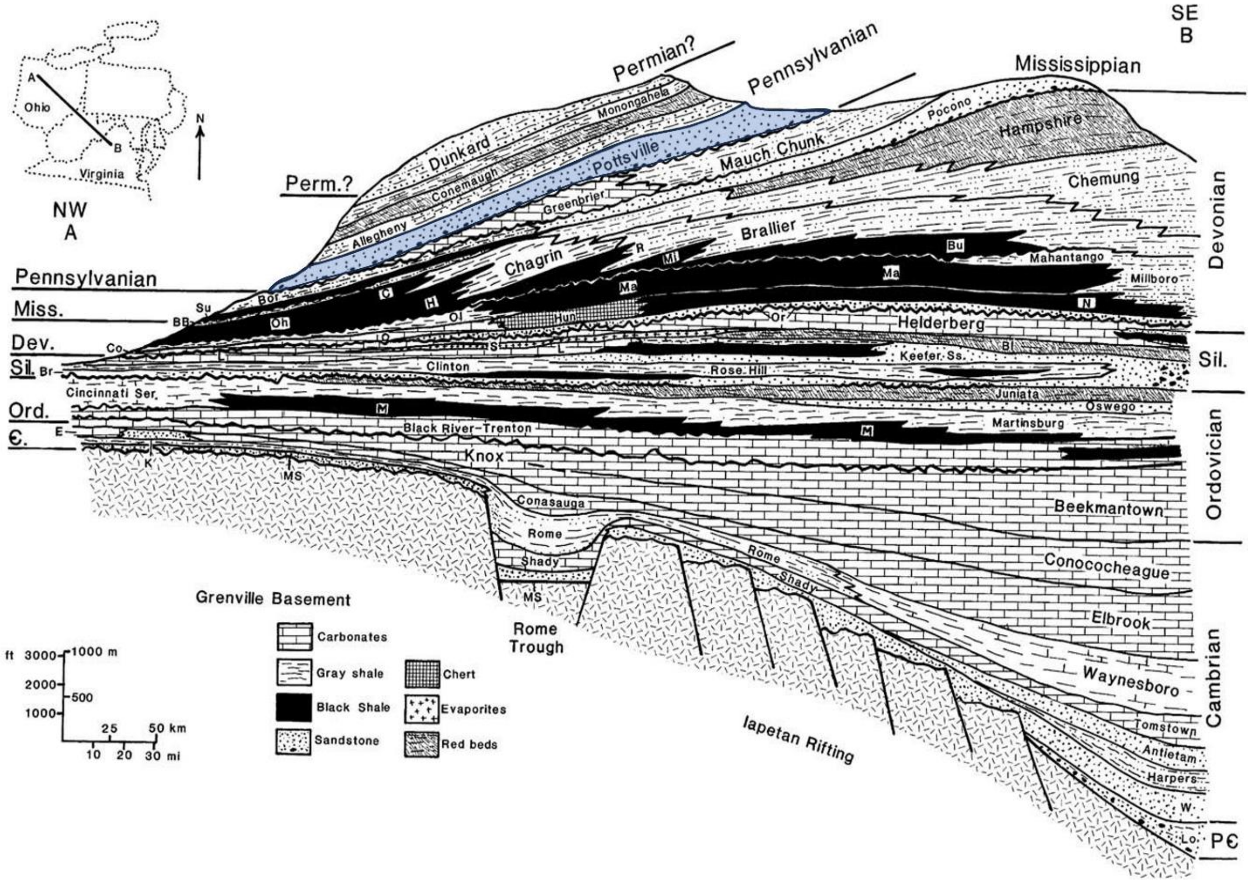

Figure 9: Schematic cross section of the Appalachian Basin from Virginia to Ohio (NW) to Virginia (SE) showing the major relationships of stratigraphic units from the Precambrian to the Permian stratigraphy. The section is flattened on the base of the Silurian. Precambrian Grenville age basement rocks and the influence of Iapetan rifting and the development of the Rome Trough is visible at the base of the section. Syn- and post-rift sedimentation is observed from the Late Precambrian through the Ordovician. The Ordovician transition to foreland basin development as a result of the Caledonian orogeny is represented by the Knox unconformity (dark black squiggly line). between the Knox Group and the Black River-Trenton limestone stratigraphic units. Subsequent flexurally and thermally driven subsidence of the foreland basin is represented by the expansion of sedimentary units across the basin as the foredeep of the basin progressively translates from the present-day southeast to the northwest (Figure from Ettensohn, 2008). Lowest underground sources of drinking water in blue.

The Early-Middle Ordovician Taconian Orogeny commenced with the Owl Creek (Knox) unconformity (Figure 8) and followed with a shift from broad deposition of carbonate facies to more structural variability, and with it, variability in sedimentation. Deposition began with the St. Peter Sandstone in the west and progressed with widening of the foreland basin and deposition of a thick (up to 7,500 ft) succession of dark shales: the Martinsburg, Reedsville, and Utica (Figure 9; Ettensohn, 2008). Dark shale deposition was followed by extensive infill of the fluvial-delta, transitional/marginal marine redbeds of the Queenston Delta (Figure 9 and Figure 10; Colton, 1970; Dennison, 1976; Blue, 2011), and development of the Cherokee discontinuity (Figure 8; Dennison and Head, 1975).

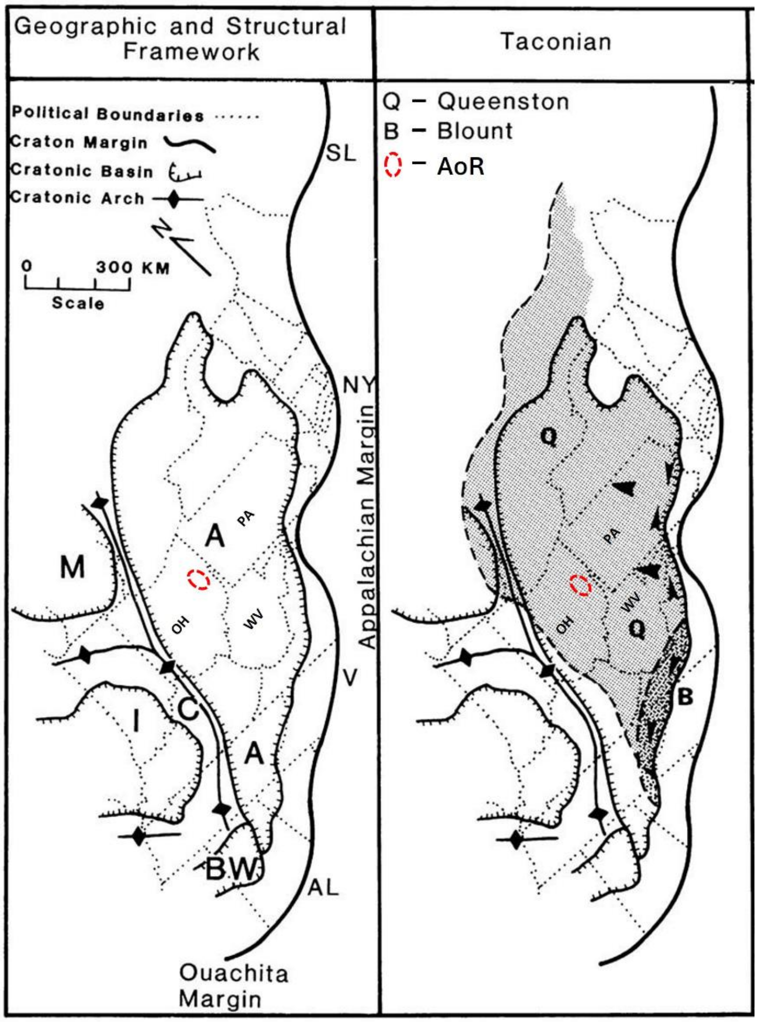

Figure 10: Distribution of Taconian Queenston Delta clastic wedge on southeastern Laurussia. Paleo currents noted by arrows. (Figure from Ettensohn, 2008).

Boucot's (1962) Salinic orogenic event was initially identified as an angular unconformity in the northeastern U.S. but marks the multi-phase north to south migration of tectonism and the accretion of Baltica to form Laurussia. A series of dark shales were deposited in the foreland basin that include the Williamson and time-equivalent Rose Hill formations (Figure 8, Figure 11 and Figure 14; Ettensohn and Brett, 1998). In the project area, Early Salinic tectonism saw the deposition of a series of iron-rich siliciclastics, shed from the Taconic highlands (Folk, 1960; Colton, 1970; Cecil et al, 2004; Ettensohn, 2008). These clastic sequences are what make up the Medina Group: Grimsby, Whirlpool, Medina, the "Clinton" sands in Ohio, and the Tuscarora of Pennsylvania (see subsection 2.4 of this Application Narrative for more information on the formations that make up the project's injection zones; Figure 10 and Figure 12; Folk, 1960; Colton, 1970).

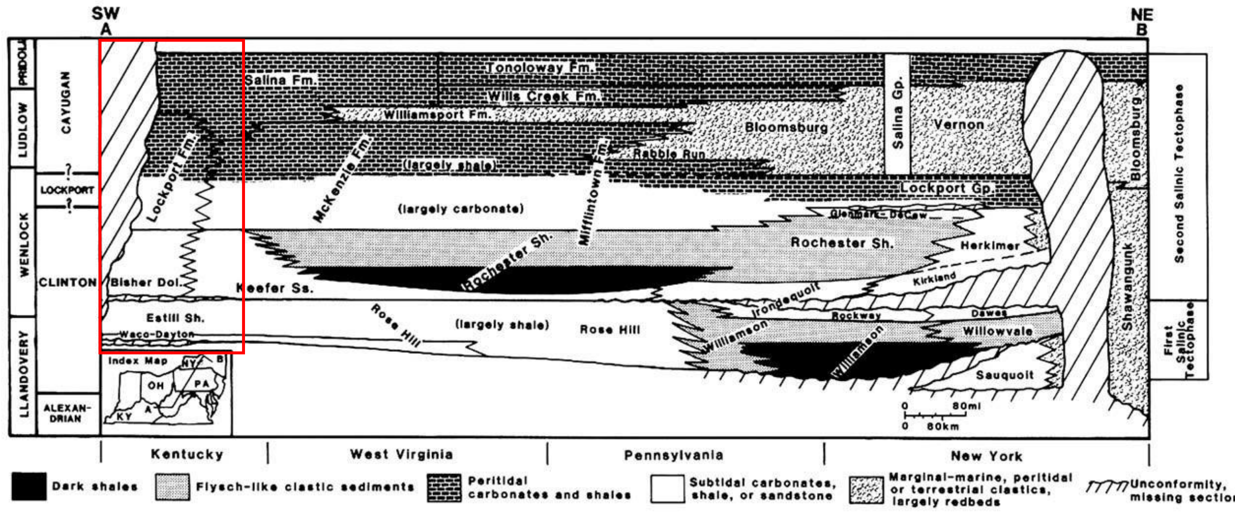

Figure 11: Southwest-northeast section partially parallel to basin strike highlighting the two Salinic phases of tectonism in the Appalachian Basin and the associated formations deposited. The red square is the approximate location of the project area. (Figure from Ettensohn, 2008).

Continued Salinic tectonism is evidenced by the Bloomsburg redbeds deposited in the foreland basin and the Salina evaporites covering the central Appalachians and Michigan Basin in response to restriction of the basin and eustatic sea-level fall (Ultieg, 1964; Rickard, 1969; Ziegler, 1989, Ettensohn, 2008). During the Middle Silurian, carbonate platform deposits formed on uplifted terranes, including the Cincinnati-Kankakee-Algonquin arch system, which isolated specific basin areas and led to widespread evaporite deposition in the Upper Silurian (Figure 12; Colton, 1970, Ettensohn, 2008; Coyle, 2022). The evaporite beds of the Salina group were followed by a period of tectonic quiescence and development of a thick succession of carbonates (Figure 8 and Figure 11; Ettensohn, 2008).

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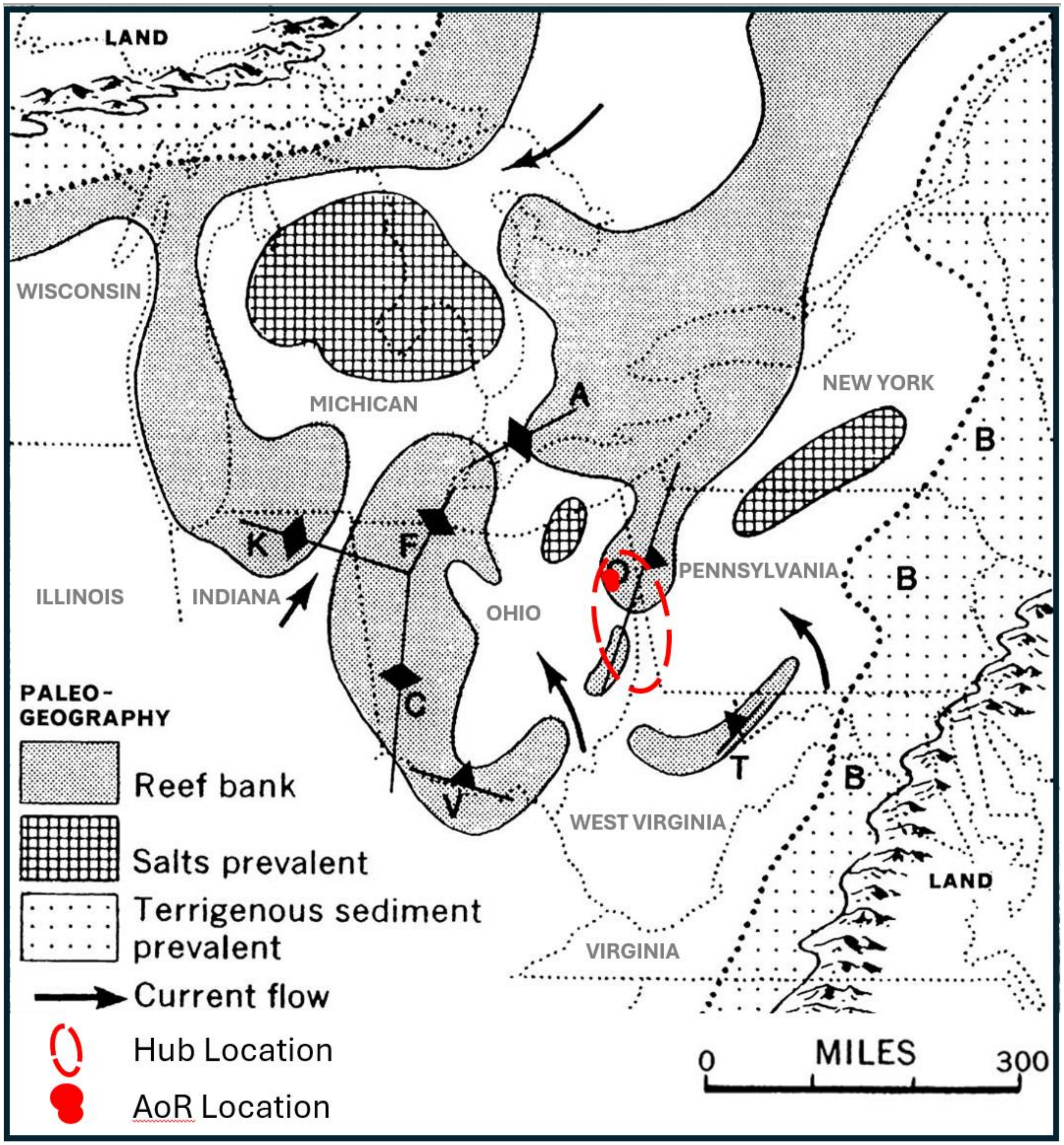

Figure 12: Schematized Late Silurian paleogeographic map of Salinic depositional systems. Deposition and lithologies were driven by bulge migration that reactivated regional basement structures, as well as by foreland subsidence. Depositional systems are labeled as the Algonquin arch (A), Findlay arch (F), Kankakee arch (K), Cincinnati arch (C), Iapetan Ohio-West Virginia hinge zone (O), Tristate block (T), and Grenvillian Vanceburg-Ironton fault zone (V). Arrows point to downthrown or down-dipping sides. Bloomsburg-Vernon redbeds (B). Adapted from Kay and Colbert (1965). Approximate Tri-State CCS Hub location in the red dashed oval and approximate AoR in orange oval shown in solid red.

2.1.6. Devonian-Permian Variscan-Hercynian Orogeny

The Variscan–Hercynian (Acadian phase) orogenic cycle is characterized by the closure of the Rheic Ocean during collision with Gondwana to form Pangaea (Kearey et al., 2009; Torsvik and Cocks, 2016). The Early Devonian Acadian orogenic phase of the Variscan-Herynian orogeny is characterized by dextral transgressional accretion of the Avalon and Laurussian terranes moving from northeast to southwest; this contrasts with the sinistral accretion of the Salinic orogenic cycle (van Staal et al., 1998; Ettensohn, 2008). Onset of the Acadian orogeny is marked by the Wallbridge discontinuity (Figure 9) and deposition of the Lower Devonian Oriskany Sandstone (Figure 10; Colton, 1970; Etensohn, 2008). Continued cyclic orogenesis is characterized by the deposition of the Onondaga Formation and is later characterized by transgressive black shales (Marcellus Shale) alternating with clastic wedge deposits (Mahantango Formation) Figure 10; Ettensohn, 2008). The transgressive shales were deposited in the proximal foreland basin, while coarser clastics were deposited craton-ward in toward the peripheral bulge of the foreland basin (Figure 10; Colton, 1970; Ettensohn, 2008). Paleogeographically, the amalgamating supercontinent of Pangaea was moving progressively northward during this time and passing from an arid sub-tropical climatic belt to a more humid tropical equatorial region (Scotese, 2003).

The Alleghenian orogeny is the final tectonic phase of the Appalachian Foreland Basin, signifying the ultimate closure of the Rheic Ocean and the gradual amalgamation of Gondwana and Laurussia, sealing the two landmasses together from South to North and forming Pangaea (Kearey et al., 2009; Torsvik and Cocks, 2016). Alleghenian related foreland basin subsidence is recorded in the sediments deposited from the Monday Creek Unconformity in the Pennsylvanian through the Early Permian (Figure 9 and Figure 10; Sloss, 1963). Hatcher (2005) described the Central Appalachian Basin as a broad fold and thrust belt with megathrusts carrying Paleozoic crust 218 mi across the Laurentian Platform and foreland basin. The thickest accumulations of these siliciclastic sediments, reaching up to 9,500 ft in thickness, are concentrated in the foredeep of the foreland basin (Figure 10; Meckel, 1967; Colton, 1970; Patchen et al., 1985a, b). In contrast to the distribution of clastic wedges in the previous orogenic events, a blanket of siliciclastic sediment advanced westward for over 620 mi, indicative of an overfilled foreland basin (Jordan, 1995). Notably, the sedimentary profile of this orogeny deviates from previous tectophase cycles, primarily comprising terrestrial (abundant coal) and marginal-marine, molasse-like sediments (Ettensohn, 2008). Sediments associated with the Alleghenian orogeny were deposited in a humid climate in a tropical equatorial belt with various paralic, estuarine, fluvial, and alluvial-plain environments being prevalent during this time (Scotese, 2003; Cecil et al., 2004; Ettensohn, 2008).

2.1.7. Paleogeographic Influences on Sedimentation

Though the regional tectonism is the primary control on sedimentation in the basin, the cyclic nature of the sedimentary fill in the basin is also influenced by the paleogeography and glacial-interglacial eustatic cycles (Cecil et al., 2004; Ettensohn, 2008). Through early Cambrian time, the Appalachian Basin area of the Laurentian continent shifted latitudinally from 60° to 40°S, and further north to 15°S through the Late Mississippian. By Late Permian, the Appalachian Basin area was located 5°N of the Equator (Kearey et al., 2009; Torsvik and Cocks, 2016). This shift to the north is recorded in the siliciclastic-carbonate-siliciclastic pattern of basinal sedimentation as the landmass passed through varying climatic zones (Scotese, 2003; Cecil et al., 2004).

2.1.8. Summary

Sediments deposited from the Upper Cambrian to the Middle Ordovician and the Upper Ordovician to the end of the Silurian are the intended injection complexes for this sequestration project (Figure 30). The oldest injection complex includes: the Conasauga Group (lowest confining zone), Knox Group: Copper Ridge Dolomite (confining/possible injection), Rose Run (injection zone), Beekmantown Dolomite (confining/possible injection zone), and Wells Creek Formation (Knox upper confining zone). The middle injection complex consists of the Queenston Shale (lower confining zone for the Medina), the Medina Group (middle injection zone), and the Rochester Shale (upper confining zone of the Medina Group and lower confining zone of the Lockport Group). Another potential injection complex includes the Lockport Dolomite Group (possible upper injection zone), and Salina Group (Uppermost Confining Zone). Characterization, lateral continuity, and remaining uncertainties are discussed in subsection 2.4 of this Application Narrative.

2.1.9. Hydrogeology

Aquifers in the central region of the Appalachian Basin remain in the shallow subsurface and are represented by aquifers through the Lower Pennsylvanian (Figure 11 see subsection 2.1.5 of the Application Narrative). They are the Conemaugh Group, Allegheny Formation, and Pottsville Group (Sharon Sandstone), and in the project area, they are less than 1,000 ft below ground surface (bgs). Each of these units has various geologic intervals that serve as aquifers or aquitards, and are shown in Figure 61 and described further in subsection 2.7 of this Application Narrative. The hydrology of the region is largely influenced by seasonal precipitation, snowmelt, and groundwater recharge.

2.1.10. Mining

Mining in Ohio has played a significant role in the state's economic and industrial development, particularly through the extraction of coal, limestone, clay, and salt. The Appalachian Coal Basin, encompassing southeastern Ohio, has historically been a major coal-producing region, with deposits from the Pennsylvanian-age Allegheny and Monongahela formations being widely mined for use in power generation and industrial production (Lamborn, 1942; Milici, 2014; Wright and Erber, 2018). These coals have also been evaluated for their resource potential in coalbed methane (Milici, 2014). Additionally, Ohio's salt resources, primarily from the Silurian Salina Group near Lake Erie, have been extensively mined for use in road de-icing and chemical industries (Clifford, 1973; Hansen, 1996).

The project area is located mostly within the western, unfolded, portion of the Dunkard Basin, though the westernmost portion of the folded eastern Dunkard basin, where some coalbed methane has been produced (Milici, 2014). Mineable coal resources are found in upwards of 40 counties in eastern Ohio, though not all have been mined (Figure 13; Brant and Delong, 1960; Wright and Erber, 2018). The coals occur in the same stratigraphic intervals that have been identified as underground sources of drinking water as outlined in subsection 2.7 of the Application Narrative: the Pottsville, Allegheny, Conemaugh, and Monongahela. Pennsylvanian coals are commonly present in the panhandle of West Virginia and southwestern Pennsylvania, as well (Milici, 2014).

Additionally, the Permian Dunkard group is present, though the coals are generally thin and low quality, even in the well-developed fluvial–lacustrine deltaic plain (Fedorko and Skema, 2013).

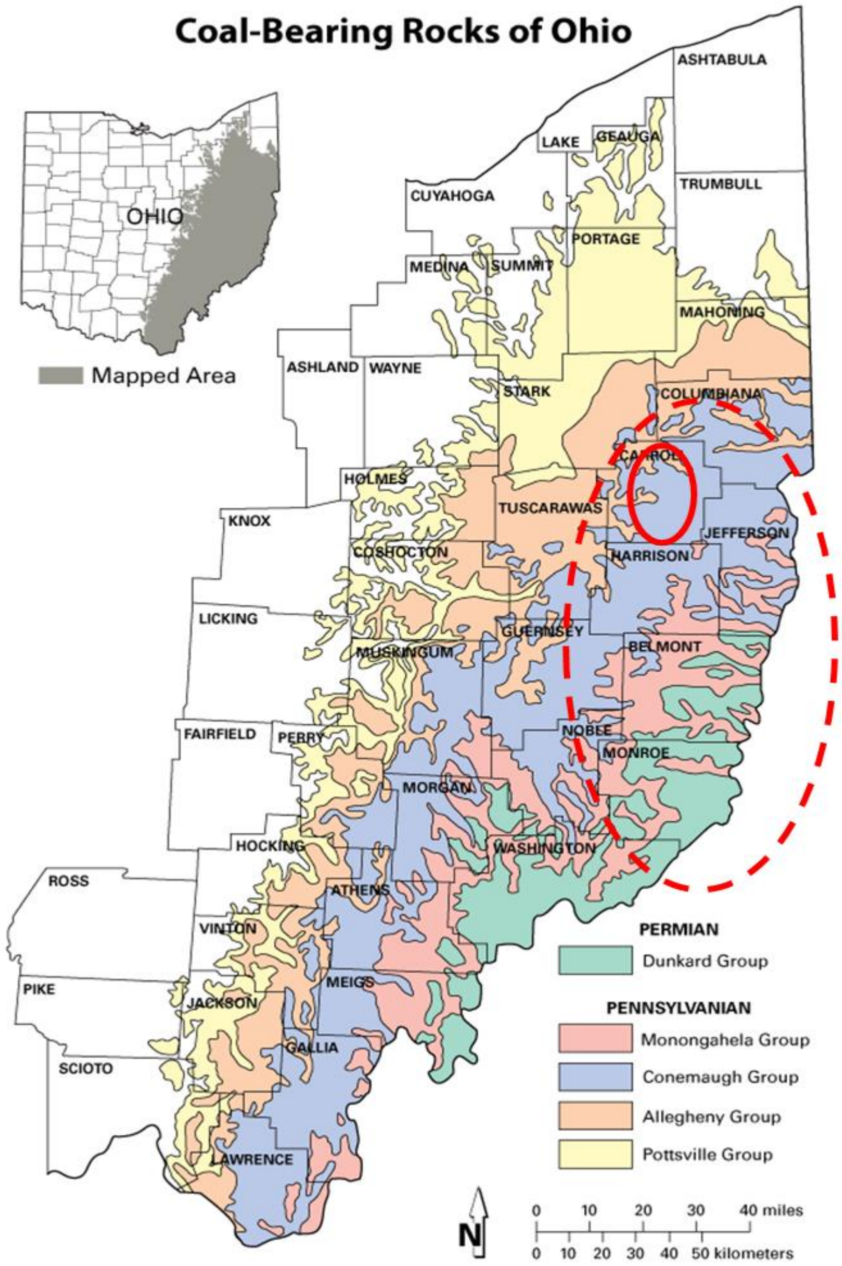

Figure 13: Map of coal bearing rocks in Ohio. Project area is the red dashed oval, and the approximate AoR is the solid red oval. Modified from Wright and Erber, 2018).

Figure 14 shows the stratigraphic column of the major lithologic units and their associated coals in the Pennsylvanian and Permian Systems in Ohio (Wright and Erber, 2018). The coals outlined in the dashed red lines are the minable coals in Carroll County, Ohio.

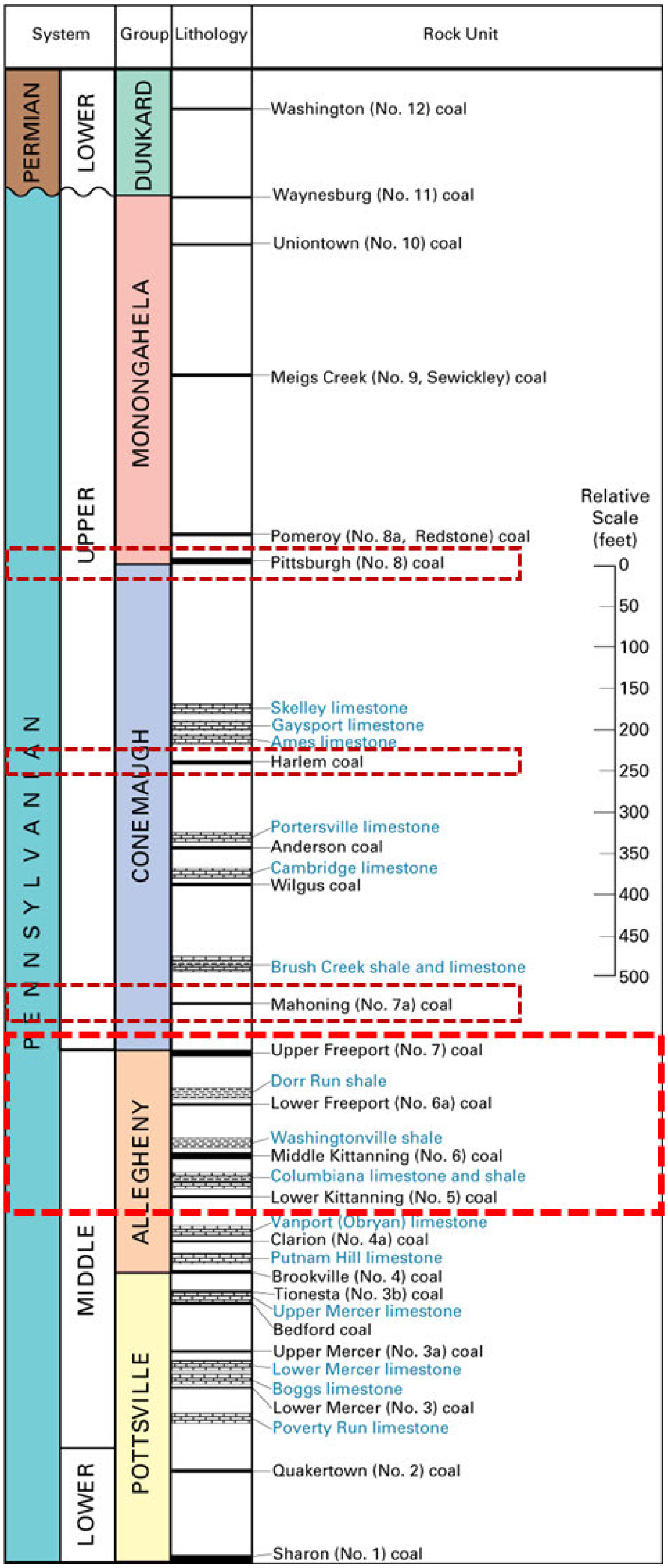

Figure 14: Stratigraphic column of the major lithologic units and their associated coals in the Pennsylvanian and Permian Systems in Ohio (modified from Wright and Erber, 2018).

The coal reserves of Carroll County are primarily derived from the Allegheny coal beds, which are exposed along the county's western and northern edges. The Brookville (No. 4) coal bed, the basal unit of the Allegheny formation, is visible near stream level in the northwest, with a thickness ranging from 14 to 28 inches, though limited data is available to the East (Brant and Delong, 1960). The Lower Kittanning (No. 5) coal bed, found midway in the Allegheny formation, crops out in the western and northwestern parts of Carroll County, ranging from 28 to 42 inches thick (Lamborn 1942; Brant and Delong, 1960). The Lower Kittanning coal bed in Ohio has a discontinuous extent, typically consisting of three coal benches separated by thin mudstone partings, though in some areas it comprises one or two benches with a single mudstone parting (Lamborn, 1942; Wright and Erber, 2018). Similarly, the Middle Kittanning (No. 6) coal bed is mainly exposed in the western half of the county and is typically consistent in thickness and areal extent, comprising a thicker upper bench, a thin mudstone parting, and a thinner lower bench (Lamborn, 1942; Brant and Delong, 1960; Wright and Erber, 2018). The Lower Freeport (No. 6a) coal bed underlies nearly all of Carroll County, with notable minable areas in the Indian Fork Creek valley and the southeastern county region near the Carroll-Jefferson boundary (Lamborn, 1942; Brant and Delong, 1960). The Upper Freeport (No. 7) coal bed is found along the western and northern parts of the county and in deep valleys to the east, with thicknesses ranging from a few inches to nearly 5 feet (Lamborn, 1942).

Above the Allegheny Group, the Conemaugh Group includes the Harlem and Mahoning coal beds, with the Harlem being more geologically robust and mined for local use (Lamborn, 1942; Brant and Delong, 1960). The Mahoning coal bed is thin and irregular throughout Carrol County but has been mined locally in Center and Fox Townships (Brant and Delong, 1960). Additionally, the Pittsburgh (No. 8) coal bed is limited to a few acres in southeastern Carroll County but is a more significant resource to the southeast (Lamborn, 1942; Brant and Delong, 1960; ODNR, 2024).

The available resources in Ohio for the Middle Kittanning (No. 6) coal have been estimated at 11.9 billion short tons. The available reserves for the Lower Kittanning (No. 5) coal in Ohio was estimated at 7 billion short tons (Wright and Erber, 2018). In Carroll County, the greatest part of the estimated reserve is also found in the Lower Kittanning and Middle Kittanning coal beds, which are followed in order of reserve importance: the Upper Freeport, Lower Freeport, with only local mining use in the Harlem, Brookville, Mahoning, and Pittsburgh coal beds (Lamborn, 1942; Brant and Delong, 1960 Wright and Erber, 2018). The Middle Kittanning (No. 6) coal has an original resource estimate of 1,186,290 thousand short tons, 32,849 thousand short tons of which have been mined, and the Lower Kittanning (No. 5) coal has an original resource estimate of 881,555 thousand short tons, 26,026 thousand short tons of which have been mined (Wright and Erber, 2018).

There are two historical and three active industrial mineral permits, 48 historic and 61 active surface mine permits, 1,666 historic and two active underground mine permits, and 24 mine openings in the AoR (Figure 14). The active underground mines in the AoR are permitted for the Middle Kittanning (No. 6) coal and the Upper Freeport (No. 7) coal (see Section 2 of the Construction Details for TB1-4 for well design details within the permitted mine and subsection 4.1.2 of the Area of Review and Corrective Action Plan for mine details).

2.1.11. <u>Local Structural Geology</u>

The project area includes the following major structural geologic features, which are discussed further below:

- Rome Trough Fault System;
- Highlandtown Fault Zone;
- Burning Springs – Cambridge Fault Zone; and
- Unnamed Compressional Faults.

Additional discussion of faults in relation to the AoR and a determination that they would not interfere with containment in the injection zones is included in subsection 2.3 of the Application Narrative.

2.1.11.1. Rome Trough Fault System

The Rome Trough Fault System is a major structural feature of the region (Figure 15) and extends from central Kentucky to the northeast, crossing West Virginia, and into western Pennsylvania. The Rome Trough Fault System represents a broad zone of deformation related to failed Eastern Interior rifting during the Early and Middle Cambrian that is associated with the opening of the Iapetus-Theic Ocean (Woodward, 1961; McGuire and Howell, 1963; Shumaker, 1986; Thomas, 1991).

In northern West Virginia, the failed rift graben of the Rome Trough is characterized by a broad, tilted horst block that is bound on its western margin by the Interior Fault and to the east by the East-Margin Fault (Figure 16; Gao et al., 2000). Seismic interpretation across the Rome Trough Fault System (Figure 16) suggests that the East-Margin Fault influenced both the basin geometry and depositional systems during the Early to Middle Cambrian rifting stage; however, during the Late Cambrian to Ordovician passive-margin and Middle to Late Paleozoic foreland basin stages, the structure is interpreted to be inactive (Gao et al., 2000).

The Rome Trough Fault System and related structures transect Marshall County, West Virginia and Washington County, Pennsylvania; they are located approximately 50 miles to the southeast of Carroll County, Ohio.

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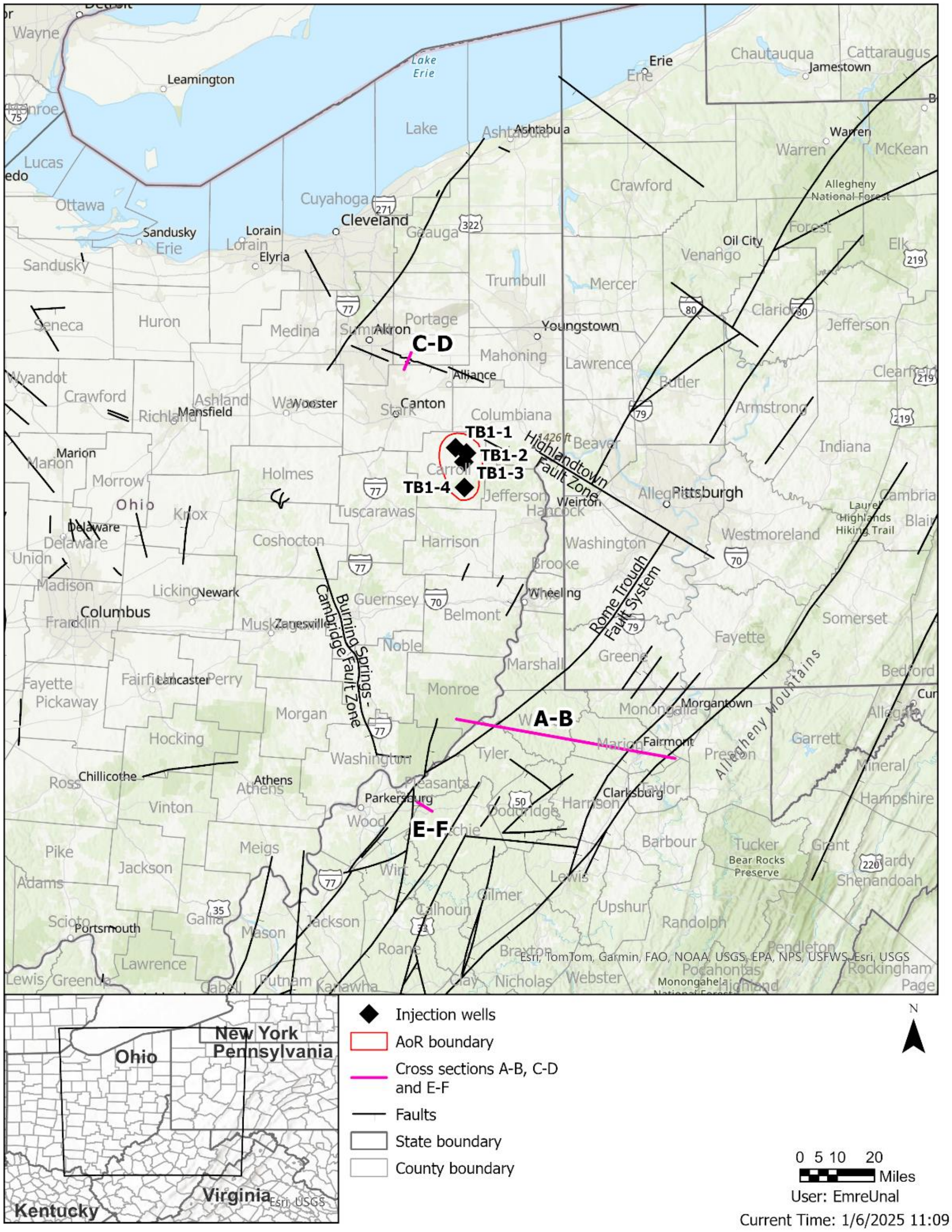

Figure 15: Regional fault map of the study area. Major structures discussed include the Rome Trough Fault System, Highlandtown Fault System, Burning Springs – Cambridge Fault Zone, and unnamed compressional faults. Location of cross-section A-B (Figure 16), C-D (Figure 17 and E-F (Figure 18) are shown. Fault locations adapted from Baranoski, 2013; Root and Onasch, 1999. The AoR boundary is shown as a red oval.

2.1.11.2. Highlandtown Fault Zone

The Highlandtown Fault Zone (Figure 17) extends from southwestern Pennsylvania through northernmost West Virginia, continuing across northeastern Ohio (Root and Onasch, 1999). The Highlandtown Fault Zone is composed of multiple en-echelon fault segments. Near northern West Virginia, this segment of the fault is referred to as the Pittsburgh-Washington lineament (Gray, 1982) or the Pittsburgh-Washington cross-strike structural discontinuity (Baranoski, 2013). The Highlandtown Fault lies approximately 5.5 mi from the most northern injection well in the project area.

The Highlandtown Fault Zone is characterized by a series of steeply dipping basement faults that transect the structural grain of the region at a high angle (Root and Onasch, 1999). The fault system generally dips to the south and exhibits normal displacement that occurred intermittently throughout the Paleozoic, affecting both the distribution and thickness of Cambrian to Permian age sediments (Root and Onasch, 1999). Figure 17 shows an example seismic line and interpretation across the Highlandtown Fault Zone in Ohio showing normal fault displacement and development of a flexural monocline in Paleozoic strata (Root and Onasch, 1999).

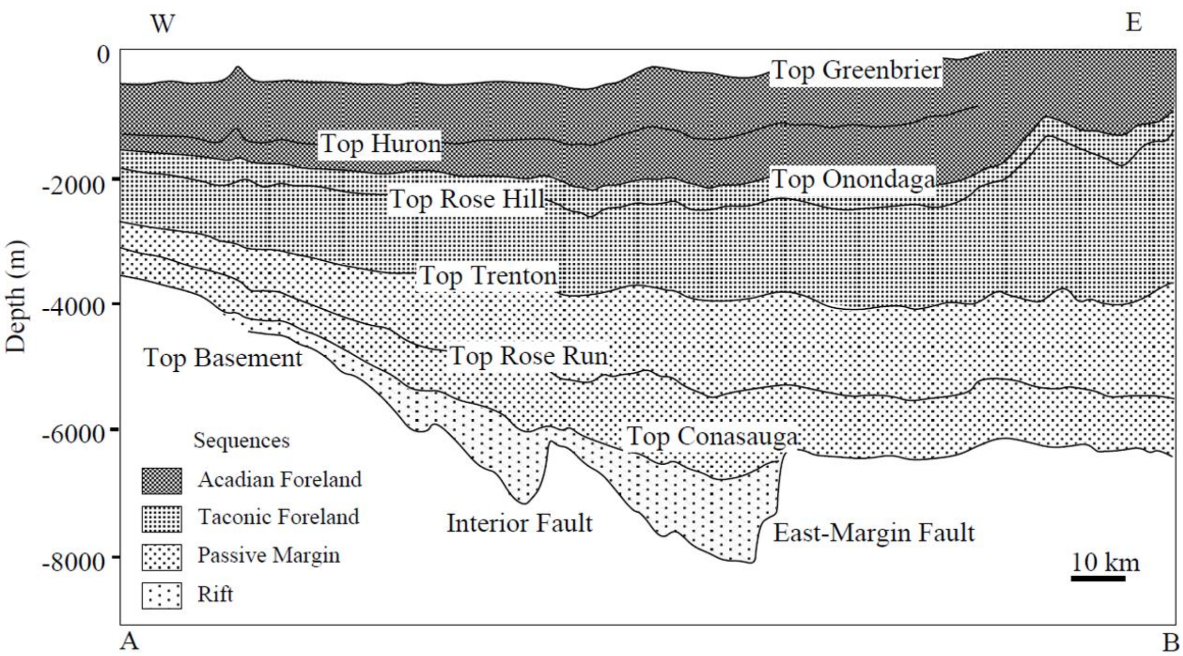

Figure 16: Regional cross-section across the Rome Trough Fault System. See Figure 15 for location of cross-section A-B. Interior Fault and the East-Margin Fault are part of the Rome Trough Fault System. From Gao et al., 2000.

2.1.11.3. Burning Springs – Cambridge Fault Zone

The Burning Springs–Cambridge Fault Zone, also known as the Cambridge cross-strike structural discontinuity (Baranoski, 2013), trends north-northwest and extends from north-central West Virginia across Ohio toward Lake Erie (Root, 1996; Figure 15). The Burning Springs segment of the fault is in West Virginia and transects the Rome Trough Fault System at a high angle.

The Burning Springs segment of the fault zone is characterized by a broad zone of deformation that includes both basement-involved high-angle normal faulting and northwestward directed thrust faulting (Root and Onasch, 1999). Basement-involved normal faulting, similar to the timing of other structures in the area, occurred on the Burning Springs fault segment from the Cambrian to the Pennsylvanian-Permian (Root, 1996). Later episodes of detached thrust faulting along the Burning Springs–Cambridge Fault Zone is attributed to the Pennsylvanian-Permian age Alleghanian orogeny (Root and Onasch, 1999). Compressional deformation associated with the Alleghanian orogeny forms several well developed anticlines, which includes the Burning Springs anticline, as a result of fault-related thrust faulting (Figure 18).

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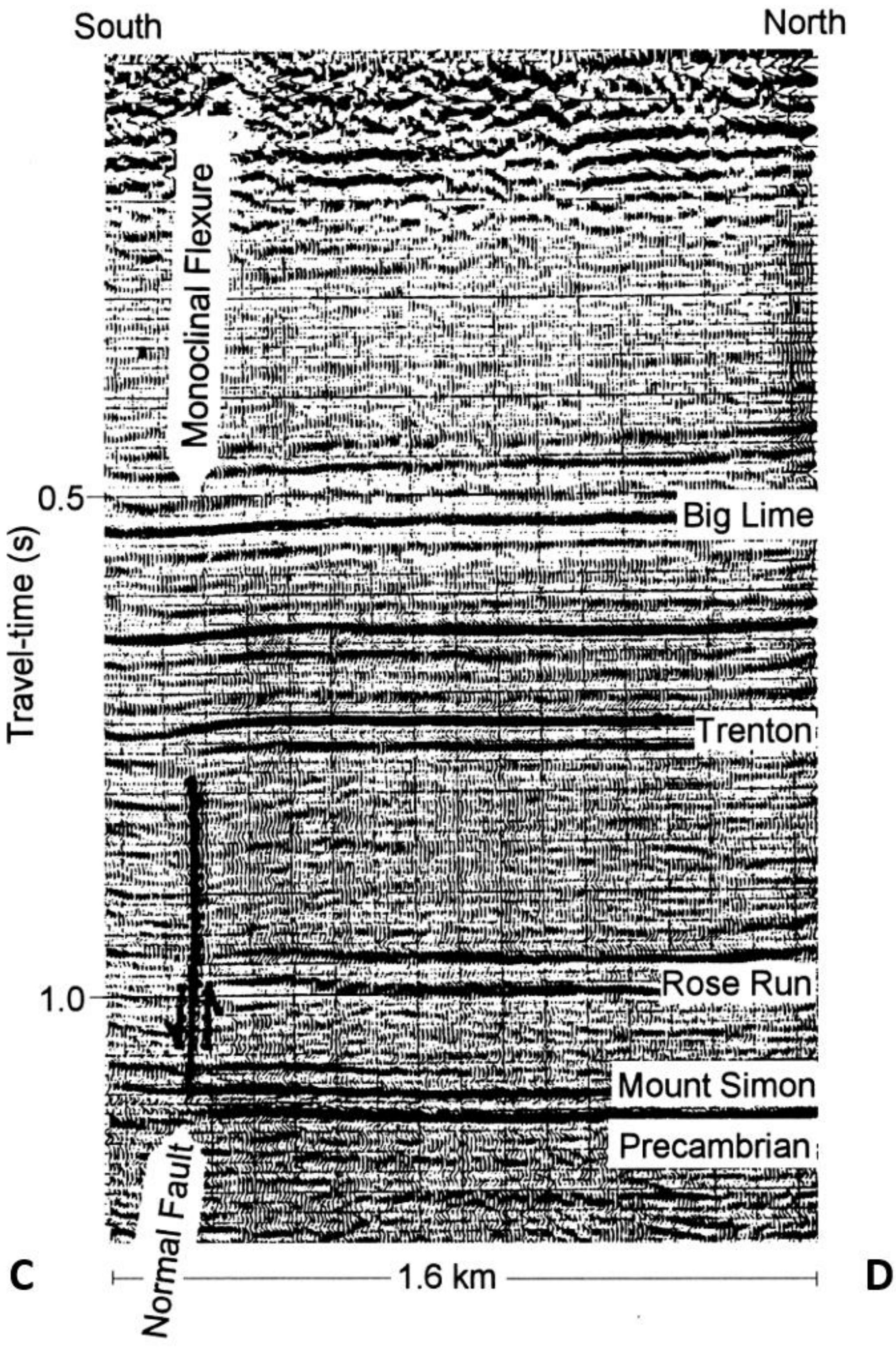

Figure 17: Example seismic cross-section across the Highlandtown Fault System in Ohio, see Figure 15 for location of cross-section C-D. From Root and Onasch, 1999. Note, "Big Lime" nomenclature is equivalent to the Greenbrier series in Southern West Virginia (Wilpolt and Marden, 1959).

2.1.11.4. Unnamed Compressional Faults

Several examples of unnamed compressional faults are observed from seismic reflection data in northernmost West Virginia and eastern Ohio (Figure 15). These faults were originally observed on reprocessed seismic reflection data collected as part of the Consortium for Continental Reflection Profiling (COCORP) in Ohio (Dean et al., 1998; Baranoski, 2013). Similar structures are also observed on seismic reflection data interpreted in West Virginia and Ohio as part of this project (see subsection 2.3 of this Application Narrative for a discussion of these structures).

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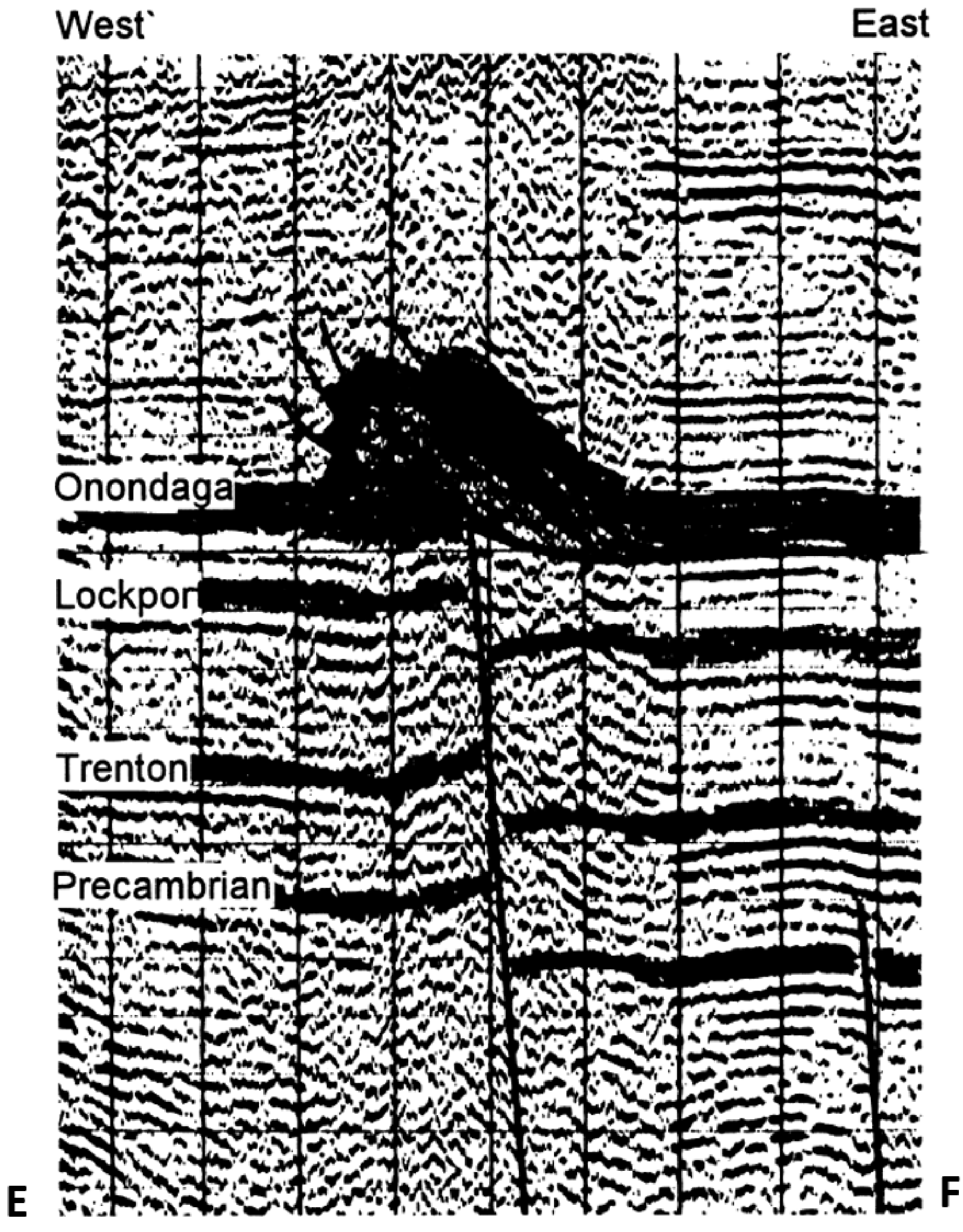

Figure 18: Seismic reflection profile across the Burning Springs anticline in West Virginia. Located along the Burning Springs – Cambridge Fault Zone. From Root and Onasch, 1999.

2.1.12. Data Used for Geologic Characterization

The data used to develop the geologic model for the project includes drilled well information and two-dimensional (2D) seismic data. Drilled well information includes location, deviation surveys, well logs, hydrocarbon production, and wastewater injection rates from various 3rd party vendors, State databases (ODNR), and publicly shared research. The well logs include Measured Depth, Gamma Ray (GR), Neutron Porosity Sandstone, Density Porosity Sandstone, Bulk Density, Spontaneous Potential (SP), Caliper, Shallow, Medium and Deep Resistivity, and Sonic. In addition, historic core analyses from 17 wells along with literature analyses from other core were used to characterize the injection complexes (Table 2).

Digital well logs from 111 legacy wells were licensed and loaded into Petrel geologic interpretation software (Petrel is trademarked by and licensed from Schlumberger (SLB) Corporation) and used for petrophysical evaluation and picking tops for the three CCS Systems' reservoirs and confining units. An additional 141 wells with formation tops were used for structural control. Well log cross sections, shown later in this Application Narrative, were created using a subset of these logs. Subsets of these data sets were used to build the petrophysical model and calculate the porosity and permeabilities for the injection complexes (further discussed in subsections 2.4 and 2.5 of this Application Narrative). Locations of wells, cores, and type logs used to evaluate the subsurface and build the geologic model are outlined in Table 2, and their locations are shown in Figure 19 through Figure 21.

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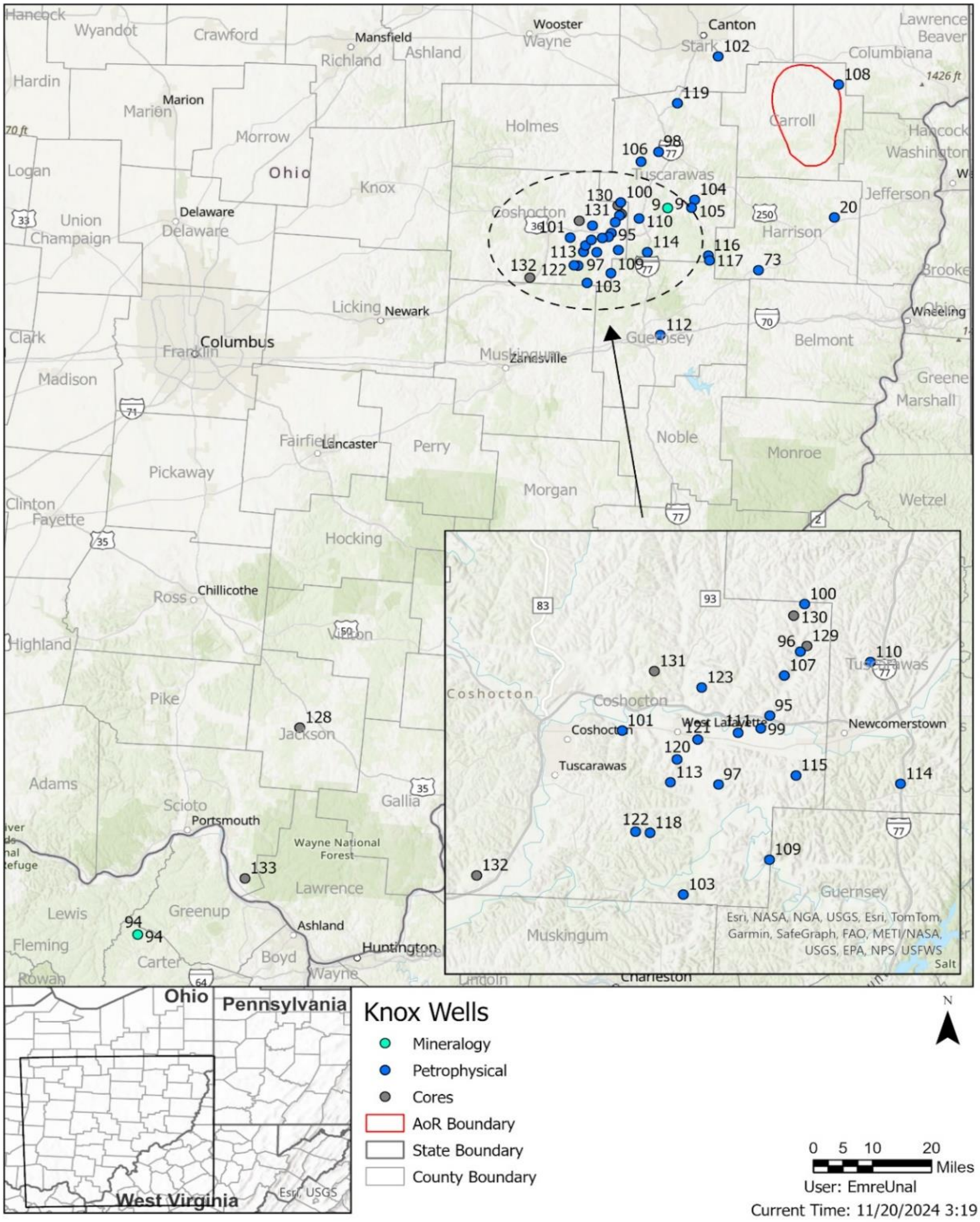

Figure 19: Location of wells used to characterize the Knox Group mineralogy and petrophysics and wells used for the core study. See Table 2 to match well numbers with API numbers, latitudes, and longitudes.

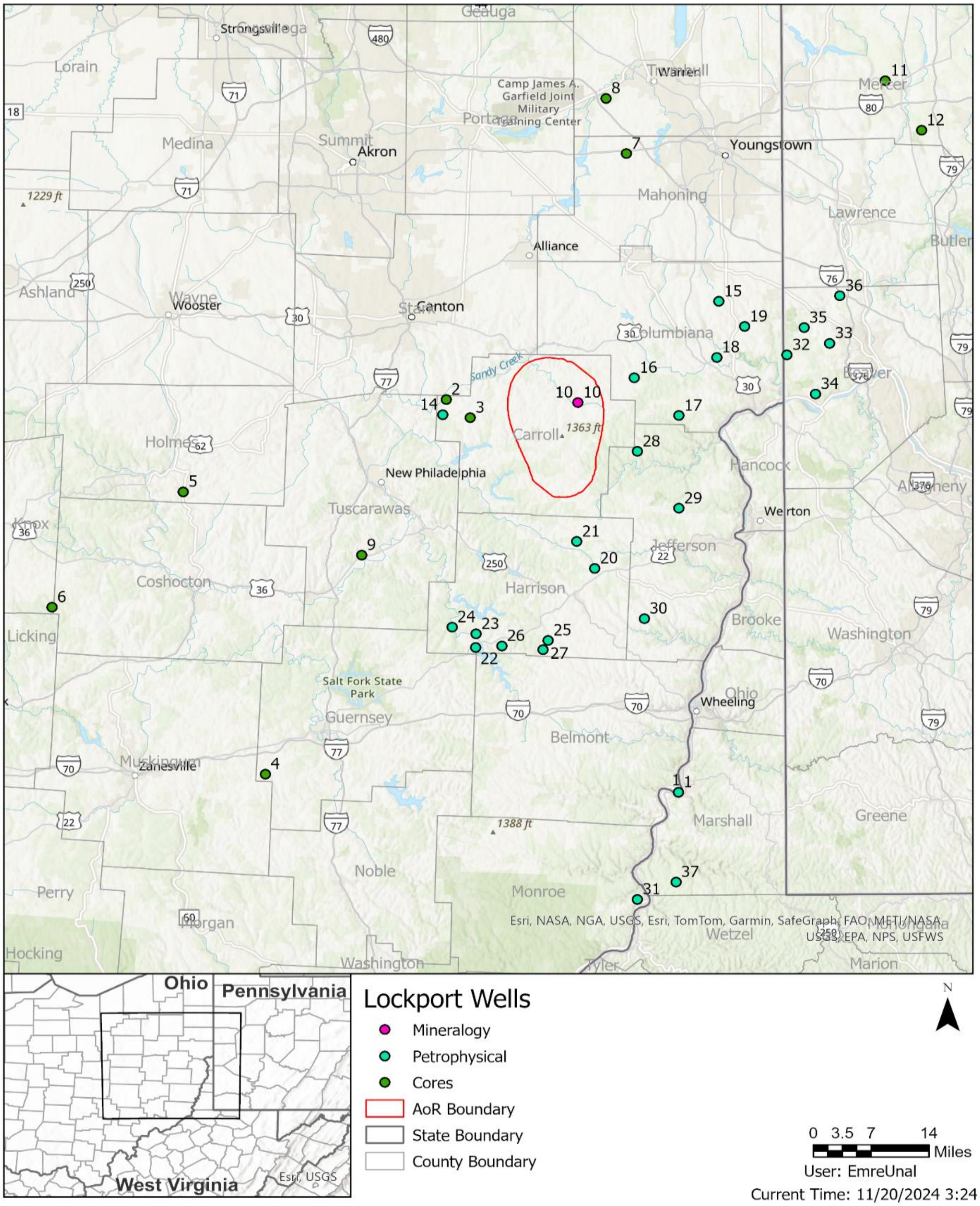

Figure 20: Location of wells used to characterize the Lockport Dolomite Group mineralogy and petrophysics and wells used for core study. See Table 2 to match well numbers with API numbers, latitudes, and longitudes.

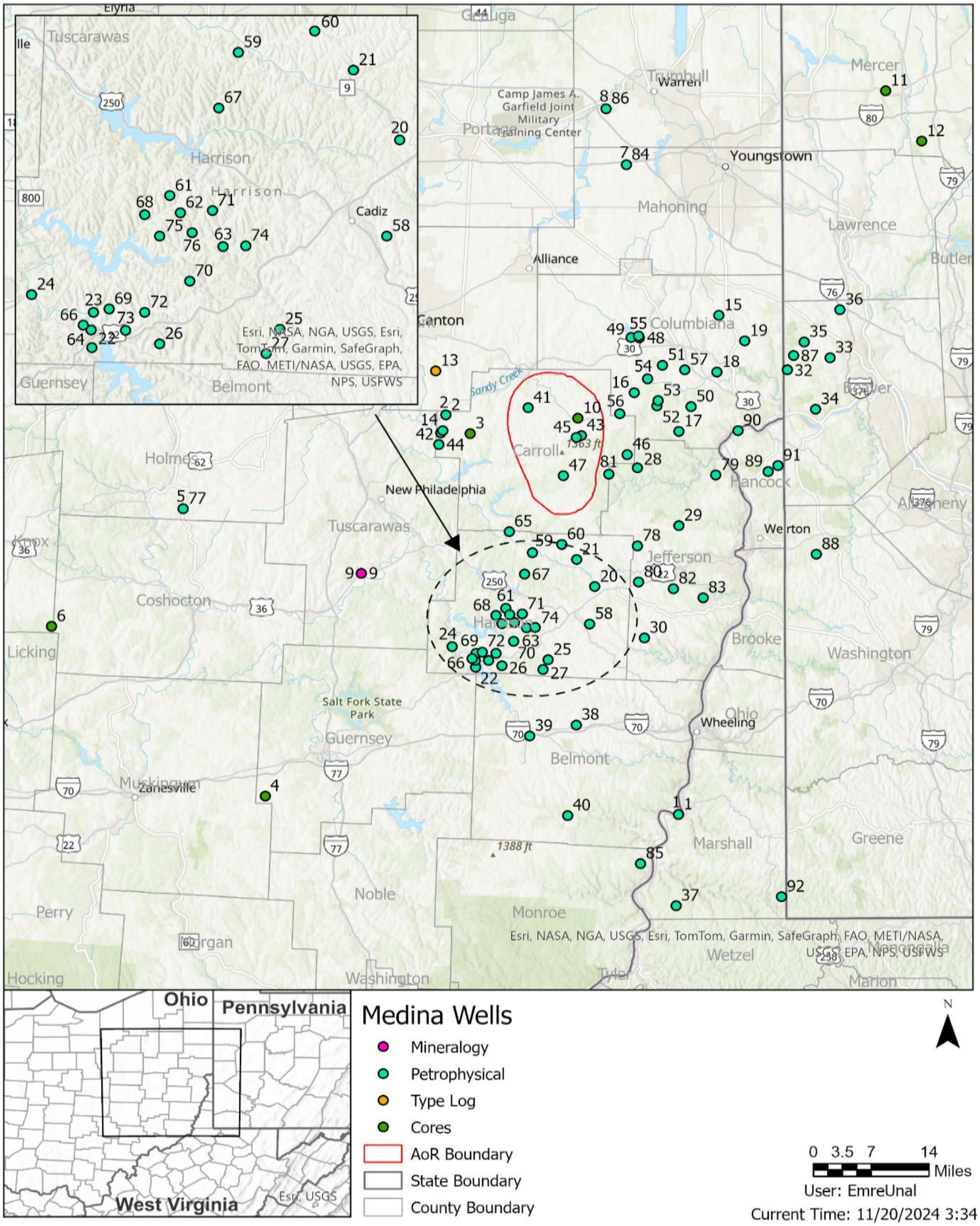

Figure 21: Location of wells used to characterize the Medina Group mineralogy and petrophysics and wells used for core study. See Table 2 to match well numbers with API numbers, latitudes, and longitudes.

Table 2: List of well names, API numbers, latitude and longitudes (WGS 84) for core, type logs, literature core studies, and petrophysical model logs used to build the geologic model.

Well Name and Number	API	Lat	Long	Well Numbers
Medina/Lockport Wells with Core				
MRCSP-FEGENCO 1	34013205860000	39.9128346	-80.7642922	1
SMITH B P & EVANS S T 4	34019202560000	40.6439492	-81.297143	2
KAPLAN UNIT 3	34019204460000	40.61018	-81.2412	3
LINKHORN 1	34059209210000	39.9448517	-81.7066625	4
WAGERS WILLIAM 1	34075209900000	40.4690814	-81.9009046	5
WILT JOHN & EVELYN 1	34083212600000	40.2512567	-82.1989563	6
INTERSTATE INTERCHANGE 1	34099204320000	41.1019946	-80.8807876	7
SHERMAN WM C 1	34155200390000	41.2048016	-80.9274195	8
BELDEN BRICK UNIT (OHIO GEOLOGICAL SURVEY CO2) 9 (1)	34157253340000	40.3537051	-81.4899615	9
Wells from Core Study - Lockport/Medina				
Great Lakes Energy Ocel #1 well in Carroll County, Ohio	34019219720000	40.638621	-80.993042	10
Johnson #1 well in Mercer County, Pennsylvania	37085214680000	41.235710	-80.278039	11
Baker #1 well at Kilgore pool, Mercer County, PA	37085216960000	41.142730	-80.195044	12
Medina Type Log				
Sickafoose-Morris #1	34151220180000	40.724857	-81.321837	13
Medina Mineralogy				
BELDEN BRICK UNIT (OHIO GEOLOGICAL SURVEY CO2) 9 (1)	34157253340000	40.353705	-81.489962	9
Lockport Mineralogy				
Great Lakes Energy Ocel #1 well in Carroll County, Ohio	34019219720000	40.638621	-80.993042	10
Lockport Petrophysical Wells				
MRCSP-FEGENCO 1	34013205860000	39.9128346	-80.7642922	1
HICKORY CLAY 12	34019219200000	40.6153861	-81.3044823	14
COLBOURN UNIT 1	34029216560000	40.8263292	-80.667427	15
ALBANESO 24-14-4 8H	34029217050100	40.684917	-80.863286	16
JANIE TRUST 5-12-3 1	34029217060000	40.6141223	-80.7603322	17
KERNICH 3-10-2 1	34029217240000	40.722447	-80.672836	18
CARNEY 17-7-1 3	34029217270000	40.7796295	-80.6083972	19
CHARLENE SCHANEY ETAL 1	34067203550000	40.3301239	-80.9547212	20
ARBAUGH BRUCE 1	34067204270000	40.3798018	-80.9956969	21
MORRISON P 1	34067205260000	40.18257	-81.2278256	22
DUNLAP HARVEY L & SHIRLEY 1	34067205310000	40.2076717	-81.2263962	23
PERKOWSKI - BOND 2	34067208600000	40.2201488	-81.2813112	24
ALPHA ATH HR 1P-24	34067210740000	40.19602	-81.061169	25

Well Name and Number	API	Lat	Long	Well Numbers
BK STEPHENS 3-16H	34067211360000	40.185399	-81.167536	26
DARLA 2-22H	34067211640000	40.1785579	-81.0733873	27
BROWN 36-11-3 10	34081205070000	40.547562	-80.8566	28
DENOON 5-10-3 3	34081205130000	40.4415108	-80.7609847	29
SMITHFIELD A 1H-27	34081205430000	40.2362792	-80.841173	30
ORMET 10-15UH	34111244590000	39.713421	-80.857904	31
JAMES THARP 3H	37007203050000	40.726239	-80.510225	32
ROLLING ACRES 8H	37007203070000	40.747528	-80.4115	33
FERREBEE BEA 3H	37007203110000	40.653472	-80.445194	34
POWELL BEA 6H	37007203180000	40.776861	-80.470583	35
WALL BEA 3H	37007203520000	40.835639	-80.3875	36
SIMMS NO. U-5H	47051017310000	39.745971	-80.770265	37
Medina Petrophysical Wells				
MRCSP-FEGENCO 1	34013205860000	39.9128346	-80.7642922	1
SMITH B P & EVANS S T 4	34019202560000	40.6439491	-81.2971430	2
HICKORY CLAY 12	34019219200000	40.6153861	-81.3044826	14
COLBOURN UNIT 1	34029216560000	40.8263292	-80.6674270	15
ALBANESO 24-14-4 8H	34029217050100	40.6849170	-80.8632860	16
JANIE TRUST 5-12-3 1	34029217060000	40.6141224	-80.7603322	17
KERNICH 3-10-2 1	34029217240000	40.7224470	-80.6728360	18
CARNEY 17-7-1 3	34029217270000	40.7796295	-80.6083972	19
CHARLENE SCHANEY ETAL 1	34067203550000	40.3301243	-80.9547208	20
ARBAUGH BRUCE 1	34067204270000	40.3798020	-80.9956971	21
MORRISON P 1	34067205260000	40.1825698	-81.2278261	22
DUNLAP HARVEY L & SHIRLEY 1	34067205310000	40.2076720	-81.2263958	23
PERKOWSKI - BOND 2	34067208600000	40.2201493	-81.2813107	24
ALPHA ATH HR 1P-24	34067210740000	40.1960200	-81.0611690	25
BK STEPHENS 3-16H	34067211360000	40.1853990	-81.1675360	26
DARLA 2-22H	34067211640000	40.1785579	-81.0733873	27
BROWN 36-11-3 10	34081205070000	40.5475620	-80.8566000	28
DENOON 5-10-3 3	34081205130000	40.4415108	-80.7609848	29
SMITHFIELD A 1H-27	34081205430000	40.2362792	-80.8411730	30
JAMES THARP 3H	37007203050000	40.7262390	-80.5102250	32
ROLLING ACRES 8H	37007203070000	40.7475280	-80.4115000	33
FERREBEE BEA 3H	37007203110000	40.6534720	-80.4451940	34
POWELL BEA 6H	37007203180000	40.7768610	-80.4705830	35
WALL BEA 3H	37007203520000	40.8356390	-80.3875000	36
SIMMS NO. U-5H	47051017310000	39.7459710	-80.7702650	37
LUDE # 1H-34 1H-34	34013206790000	40.0770380	-80.9973170	38

Well Name and Number	API	Lat	Long	Well Numbers
FAMILY 1-32H	34013207090000	40.0567570	-81.1036620	39
PERKINS 1-4H	34013207340000	39.9113173	-81.0170403	40
CLARK ETAL UNIT 1	34019202860000	40.6572825	-81.1077008	41
HICKORY CARROLL CO 4	34019204780000	40.6113490	-81.3087914	42
MCALLISTER JOHN O 1	34019205530000	40.6065593	-80.9849794	43
SWEANY-JAMES UNIT 1	34019206100000	40.5895701	-81.3131064	44
NEIDER UNIT 1	34019215830000	40.6030383	-80.9969461	45
BEADNELL UNIT 1	34019216520000	40.5717596	-80.8795629	46
WHITE 1	34019220590000	40.5331573	-81.0264830	47
DONALD SELL UNIT 1	34029206070000	40.7850788	-80.8510498	48
MURRAY FRANK 3	34029206480000	40.7861729	-80.8699857	49
WILLIAMS C E & M F 1	34029206680000	40.6593033	-80.7324988	50
HILL RICHARD 1	34029207190000	40.7352959	-80.7977871	51
SOLOMON AQUILA E 21750	34029214760000	40.6606261	-80.8110942	52
HEIRS BURTON AL 21971	34029215070000	40.6703910	-80.8086462	53
THOMPSON H & S 1	34029215470000	40.7104938	-80.8325185	54
ALLIANCE/SEI UNIT 1	34029216040000	40.7885146	-80.8536301	55
SUMMITCREST INC 12785	34029216270000	40.6465978	-80.8967211	56
SOWARDS UNIT 1-K	34029216370000	40.7267276	-80.7465809	57
BIRNEY ROY 1	34067201030000	40.2619089	-80.9661006	58
SPIKER - SCIO POTTERY CO UNIT 2	34067201880000	40.3922738	-81.0980544	59
ENSLEY-LOGAN 1	34067202090000	40.4074850	-81.0301957	60
WALLACE MAX 1	34067202920000	40.2905588	-81.1588551	61
HEAVILIN EUGENE 1	34067202930000	40.2785078	-81.1495987	62
STALEY GUY & NORMA 1	34067203440000	40.2544394	-81.1113884	63
HOUSEHOLDER RAYMOND 1	34067205290000	40.1950689	-81.2285977	64
WEBB ANNA 2	34067205600000	40.4306119	-81.1511861	65
BOUSKA ANDREW JR 1	34067205830000	40.1985116	-81.2355239	66
BERRY B 1	34067205910000	40.3527693	-81.1155491	67
MALLARNEE MARION 1	34067206110000	40.2770933	-81.1811686	68
DAVIDSON BUELL M 1	34067206120000	40.2101133	-81.2125675	69
SPROULL CLYDE 2	34067206630000	40.2300886	-81.1409065	70
WALLACE KEITH 1	34067207150000	40.2800876	-81.1210706	71
MIZER THOMAS 1	34067207170000	40.2078550	-81.1807767	72
ZECHMAN THOMAS UNIT 1	34067207370000	40.1948912	-81.1978362	73
LAWLIS ELMER 1	34067207410000	40.2551535	-81.0913081	74
D C JONES 7	34067207770000	40.2619761	-81.1677784	75
ROSE ALFRED 1	34067208040000	40.2643281	-81.1391705	76
WAGERS WILLIAM 1	34075209900000	40.4690814	-81.9009046	77

Well Name and Number	API	Lat	Long	Well Numbers
COLDEBELLA V & A 1	34081203530000	40.4049240	-80.8565050	78
JACKSON J&J ETAL 1	34081204610000	40.5339639	-80.6759156	79
PELEGREEN A JR 12420	34081204810000	40.3383650	-80.8538180	80
ALLENDER J & W 45308	34081204830000	40.5356866	-80.9218305	81
NORTH AMERICAN COAL 45294	34081204900000	40.3261196	-80.7739182	82
NAC 3P-20	34081205280000	40.3095840	-80.7063310	83
INTERSTATE INTERCHANGE 1	34099204320000	41.1019946	-80.8807876	84
MONROE NORTH UNIT 2S	34111243650000	39.8227460	-80.8503840	85
SHERMAN WM C 1	34155200390000	41.2048016	-80.9274195	86
DAVID THOMPSON 3H	37007203030000	40.7520280	-80.4957780	87
STARVAGGI 1	37125222780000	40.3880750	-80.4459750	88
MINESINGER, S. 1	47029000800000	40.5398460	-80.5559060	89
GLOBE REFRACTORIES 1	47029000860000	40.6152730	-80.6243070	90
HILLCREST 1	47029000870000	40.5509900	-80.5326620	91
JOHN BURLEY 1 M-1738	47051005390000	39.7616690	-80.5299910	92
Knox Mineralogy				
BELDEN BRICK UNIT (OHIO GEOLOGICAL SURVEY CO2) 9 (1)	34157253340000	40.3537051	-81.4899615	9
KGS Hanson Aggregates 1	16043001050000	38.469552	-83.132597	94
Knox Petrophysical Wells				
BELDEN BRICK UNIT (OHIO GEOLOGICAL SURVEY CO2) 9 (1)	34157253340000	40.3537047	-81.4899616	9
CHARLENE SCHANEY ETAL 1	34067203550000	40.3301239	-80.9547212	20
ZECHMAN THOMAS UNIT 1	34067207370000	40.1948909	-81.1978361	73
JONES HAROLD 9	34031260690000	40.2876171	-81.6709819	95
ROBINSON CARL 1	34031258490000	40.3333968	-81.6440493	96
GROFF DW& RK 2	34031227570000	40.2383895	-81.7159713	97
KIMBLE FLOYD & DORIS 3	34157234490000	40.4977928	-81.5207547	98
HOFFMAN/BRAHMER 1	34031261110000	40.2786164	-81.6789061	99
MIZER STANLEY 6	34031258890000	40.3671339	-81.6406375	100
NOBLE FRANK 2	34031233770000	40.2761848	-81.8019352	101
SPONSELLER EMMA 4-A	34151219990000	40.7429211	-81.3299986	102
COLUMUS SOUTHERN 37	34031262140000	40.1599770	-81.7462271	103
EVERETT UNIT 4-K	34157253020000	40.3753438	-81.4039963	104
RENTSCH UNIT 1	34157254600000	40.3549002	-81.4134097	105
BAHLER EARL C 1	34157234470000	40.4725322	-81.5761234	106
RAND 1	34031239340000	40.3162643	-81.6583257	107
BRYAN UNIT 1	34019218500000	40.6713018	-80.9405936	108
ELDER ROBERT 3	34031260950000	40.1852234	-81.6702820	109
ARMSTRONG FRANCIS 1	34157244730000	40.3262967	-81.5819115	110

Well Name and Number	API	Lat	Long	Well Numbers
KOBEL LARRY UNIT 3	34031261280000	40.2752166	-81.6987309	111
CLEARWATER 111 (SWIW #15) 1	34059239860000	40.0272906	-81.5109665	112
OVERHOLT 1	34031262680000	40.2398007	-81.7586150	113
LOIS ARMSTRONG UNIT 2	34157244970000	40.2397674	-81.5542649	114
HACKENBRACHT JOHN W 1	34031260060000	40.2453070	-81.6473255	115
BARDALL 3-2417	34157250220000	40.2319675	-81.3593548	116
SIMMS UNIT 3	34157249820000	40.2192756	-81.3551959	117
COLUMBUS SOUTHERN POWER 7001	34031261920000	40.2035987	-81.7763079	118
MAC UNIT 1	34157245580000	40.6228487	-81.4607302	119
WIGGINS UNIT 3	34031262590000	40.2561785	-81.7529698	120
HACKENBRACHT UNIT 3	34031262650000	40.2704270	-81.7347143	121
COLUMBUS SOUTHERN POWER CO 7002	34031261930000	40.2043656	-81.7891884	122
BANTUM MICHAEL 1	34031261820000	40.3073119	-81.7315128	123
Additional Petrophysical Analysis used for static model				
HICKORY CLAY 12	34019219200000	40.6153861	-81.3044826	14
CLARK ETAL UNIT 1	34019202860000	40.6572825	-81.1077008	41
HOFFMAN UNIT 1	34029206650000	40.82313	-81.03683	124
MULINIX ETAL 1	34029214750000	40.8844972	-81.0254609	125
CURFMAN 4	34029215920000	40.7779277	-80.9897297	126
NORTHSTAR KHALIL (SWIW #11) 3	34099231570000	41.0898914	-80.6124047	127
Core Used for Knox Petrophysical Model				
HANSON AGGREGATES 1	16043001050000	38.4695519	-83.1325969	94
TREPANIER FJ & C 1	34079201020000	39.0086154	-82.6383617	128
LOWER EDGAR 1-A	34031259620000	40.337416	-81.6383476	129
OAKLEIF WALDO 1	34031240920000	40.3589025	-81.650253	130
BARTH FRED L 1	34031226530000	40.3187876	-81.7736981	131
VICKERS C& R 1	34031222680000	40.1723287	-81.9297003	132
TEST WELL in Scioto (location is center of Green Twn)	No API	38.619206	-82.801766	133

Tri-State CCS, LLC licensed a total of ~250 linear miles of existing 2D seismic lines from Evans Geophysical that transect the project area (Figure 22**Error! Reference source not found.**). These data were used to interpret site-specific and regional geologic structure, to determine lateral continuity, and build the geologic inputs used for computational modeling. The seismic data included six lines that provided data to refine the structural interpretation of the project area. Additionally, seismic data were used to confirm the lateral continuity of the injection and confining zones.

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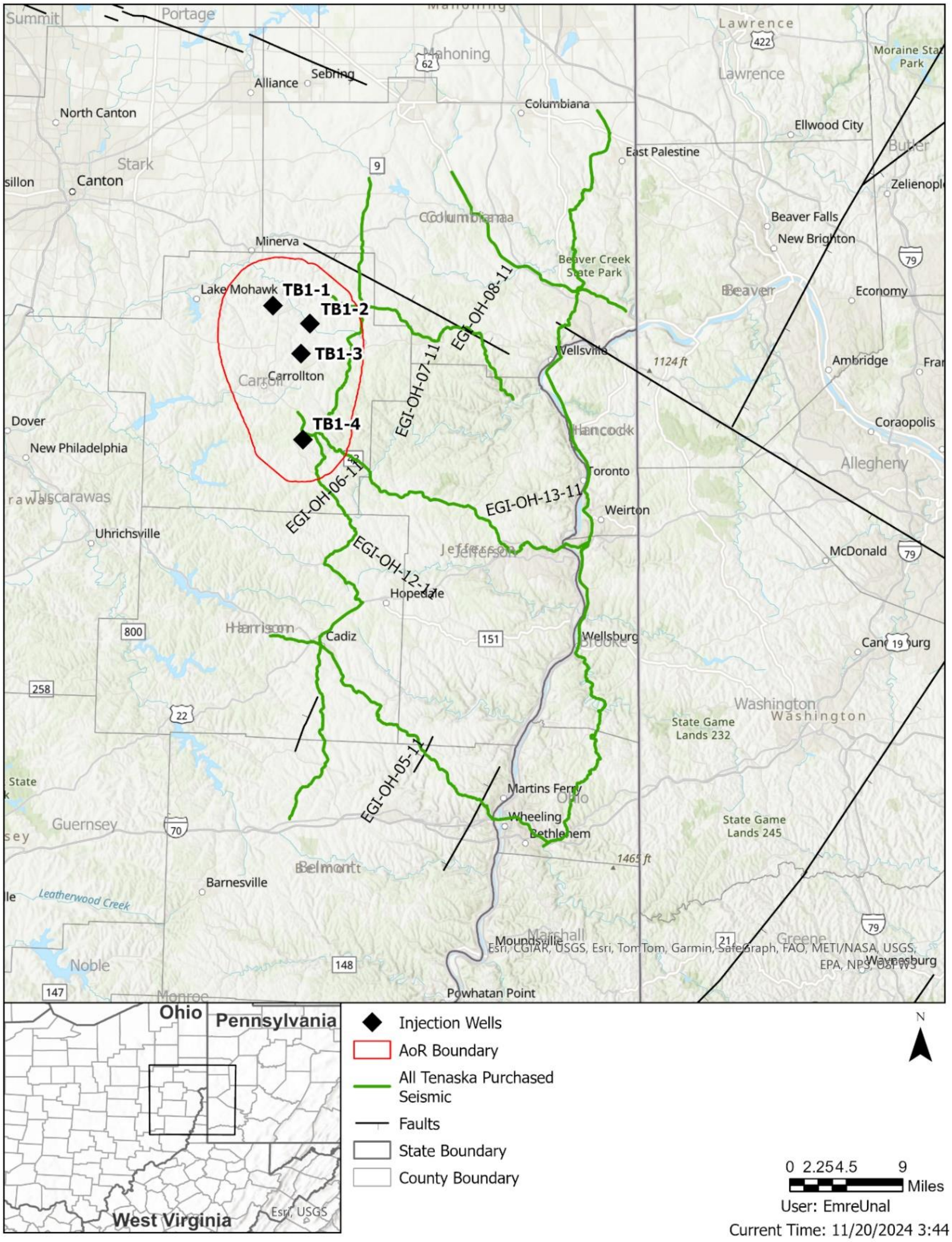

Figure 22: Location of the six 2D seismic lines used in the project's subsurface assessments. Note: 2D seismic data were licensed from Evans Geophysical.

A synthetic seismogram was created to tie the seismic data to the well data. During the synthetic seismogram creation, the 2D seismic lines were tied to sonic measurements taken in the Birney Roy 1 well (Table 2) to correlate the structural interpretation of the project area to the porosity and permeability model developed using the well log data.

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Geologic formations were then mapped on the 2D seismic data (Figure 22), and structure and isopach maps were created using both the well log tops and 2D seismic data. Together, these data sets were used to build a 3D static model in the Petrel geological modeling software suite representative of the geologic and petrophysical characteristics within the project area. The areal extent of the 3D static model is shown in Figure 36, Figure 38, Figure 39, Figure 42, Figure 44, and Figure 45 in subsection 2.4 of this Application Narrative.

2.2. Maps and Cross Sections of the AoR [40 CFR 146.82(a)(2), 146.82(a)(3)(i)]

The project consists of two primary injection complexes and one secondary injection complex: the Lockport Injection Complex (LIC - secondary), the Medina Injection Complex (MIC - primary), and the Knox Injection Complex (KIC - primary). The regional cross section in Figure 25 and the cross sections confined to the injection complexes and the model domain in Figure 26, Figure 27, and Figure 28 highlight the regional and local lateral continuity and thickness of the Lockport Dolomite Group (LIC injection zone), the Medina Group (MIC injection zone), and the Rose Run Sandstone (KIC injection zone). In addition, the Salina Group, the uppermost confining zone, the Rochester Shale Formation confining zone, and the Queenston Shale confining zone also exhibit regional and local lateral continuity and consistent thickness. The Wells Creek Formation is laterally continuous across the basin Figure 25) and has been shown to be a proven seal for stratigraphic traps in central Ohio, as discussed in subsection 2.4 of this Application Narrative. Additionally, the overlying Black River Group, Trenton Limestone, Utica Shale, and Cincinnati Group further separate it from the shallower injection zones and the USDWs. Further discussion of the regional geology, primary seal thickness and lateral extent, injection zone thickness and lateral extent, and other site-specific geologic characteristics is in subsections 2.1 and 2.4, respectively, of this Application Narrative.

The Gamma Ray and the petrophysical character of the Medina Group in the static model domain is consistent in both the dip and the strike direction. The Rose Run Sandstone thickens to the south, though the overall petrophysical character remains similar. The lowest USDW, the Sharon Sandstone in the Pottsville Group, is approximately 5,000 ft above the top of the Rochester Shale and is shown in Figure 25. Further discussion of the petrophysics of the LIC, MIC, and KIC is in subsection 2.5 of this Application Narrative, and further discussion of the Sharon Sandstone continues in subsection 2.7 of this Application Narrative.

The Highlandtown Fault is the only known regional fault in the project area and near the AoR. Interpretation of 2D seismic across the fault shows that its tip line ends stratigraphically in the Knox Group, greater than 2,000 ft below the Queenston Formation, which is a lower confining zone for upper injection zones in the project (the red line of C-C’ in Figure 24 and Figure 25). However, it does not pose a threat to containment for this project due to its location >5 miles north of the injection wells and outside the AoR. Information concerning the faults and fractures and their spatial relation to the injection wells is further discussed in subsection 2.3 of this Application Narrative.

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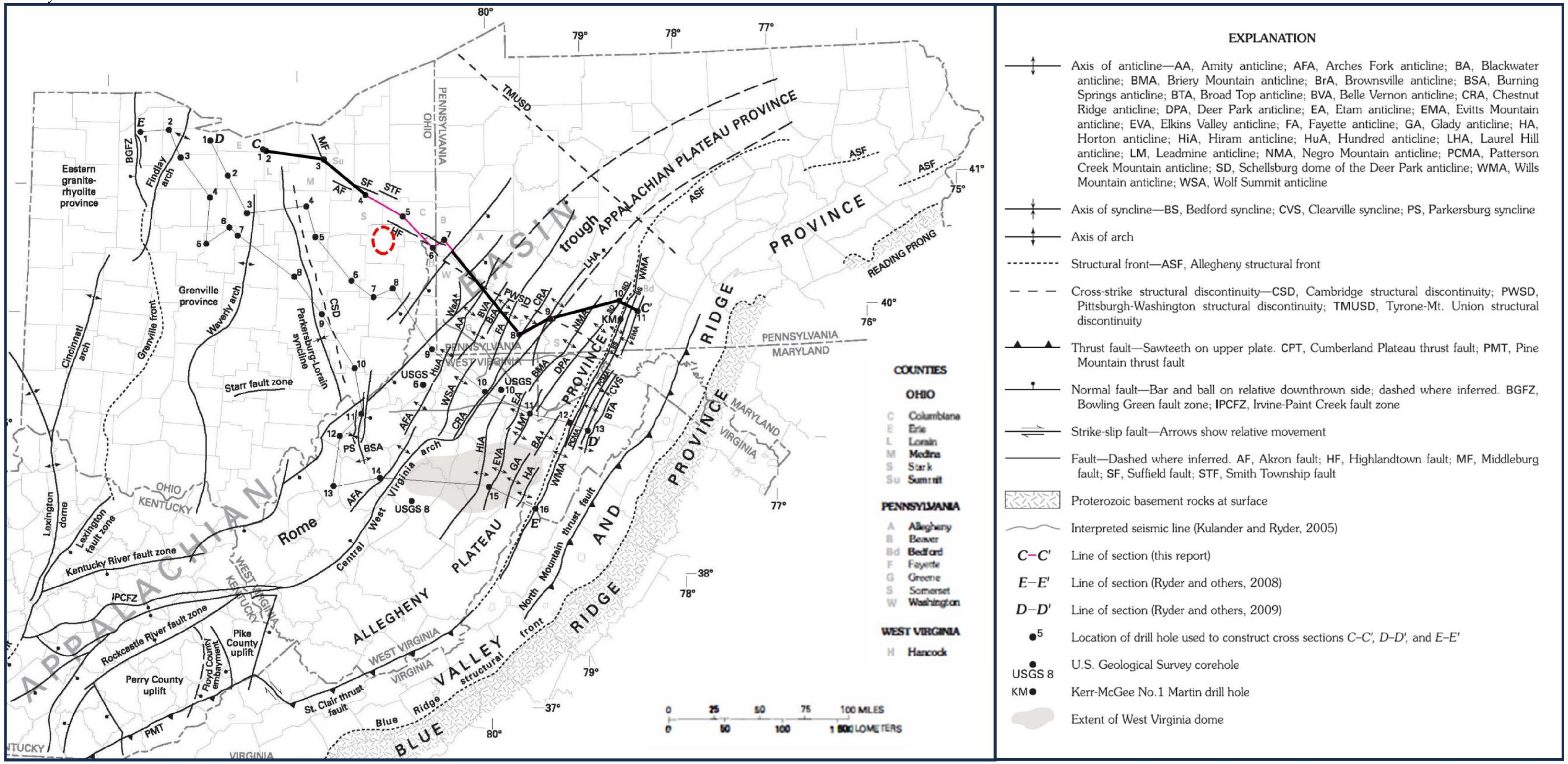

Figure 24: Base Map of the Appalachian Region and structural features with the cross section in Figure 25 shown in red. The approximate AoR is outlined in the dashed red circle. Modified from Ryder et al., 2012.

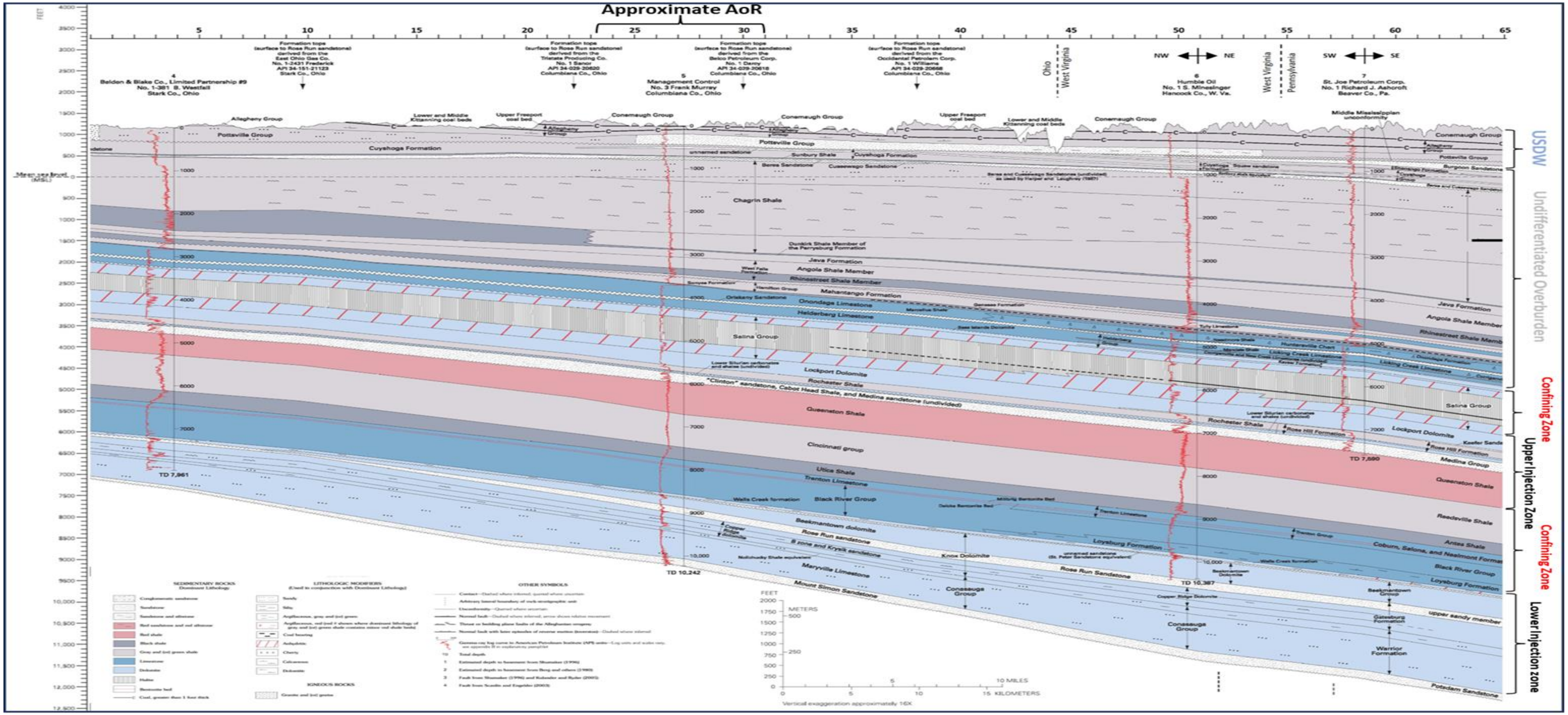

Figure 25: Regional cross section from ground level to the Cambrian Mt. Simon through the AoR (The red portion of C-C’ in Figure 24 shows position of the cross section with respect to the AoR). Modified from Ryder et al., 2012.

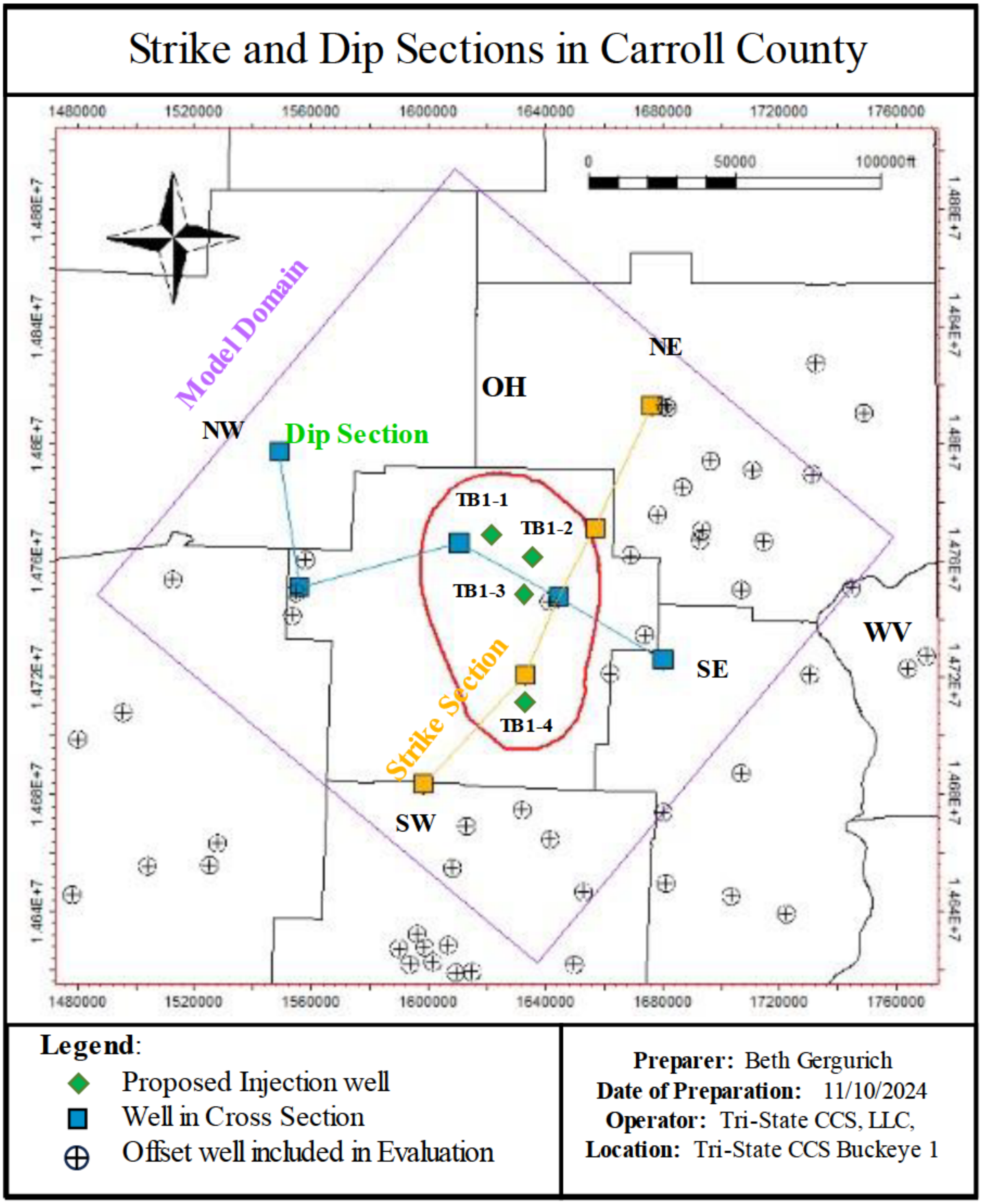

Figure 26: Base Map of the project model domain (purple), petrophysical wells included in the static model build (black circles), the NW-SE dip cross section (green teal; Figure 27), and the NE-SW strike cross section (orange; Figure 28) highlighted. The AoR is delineated by the red oval.

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2.3. Faults and Fractures [40 CFR 146.82(a)(3)(ii)]

Faulting local to the proposed injection well locations in Carroll County include the Highlandtown fault zone and several unnamed compressional faults that are observed by 2D reflection seismic data in the region. The geologic history of the Highlandtown fault zone is further discussed in subsection 2.1.11.2 of this Application Narrative. The north-south oriented 2D seismic line, OH-12-11, traverses Carroll County directly to the east of the proposed injection well sites (**Error! Reference source not found.**) and images several faults and related folds in the subsurface.

Two distinct types of faulting are observed in Carroll County, this includes Cambrian to Permian age normal faulting associated with the Highlandtown fault zone (E on Figure 29) and later Paleozoic age compressional faulting with related fault-propagation folds (A, B, C, and D on Figure 29).

The Highlandtown fault zone as imaged on seismic line A-A’ (OH-12-11) is a south-dipping high-angle normal fault that is rooted in Precambrian age basement rocks (E on **Error! Reference source not found.**). The tip-line of the fault is not observed stratigraphically above the Knox Group and extends dipping steeply into basement rocks **Error! Reference source not found.**). A small amount of differential compaction or fault related accommodation is observed stratigraphically above the fault and may influence sediment deposition as young as Permian in age (E on Figure 29); similar observations are discussed in Root and Onasch (1999).

Several unnamed faults and fault-related folds are observed along seismic line A-A’ (OH-12-11) in Carroll County and southward in Ohio (Figure 29). The observed structures are interpreted as compressional faults with fault-related anticlinal folding (A, B, C, and D on Figure 29). Anticlinal fault-related folds are well developed through the lower Paleozoic stratigraphy of the basin and ceased development by the end of deposition of the Medina Group (B, C, and D on Figure 29). The faults related to fold development of structures A, B, and C on Figure 29 are interpreted to extend to or just above the Trenton Grp with displacement across the top Knox Group horizon ranging from 0 to approximately 100 feet. The fault trace and observable displacement related to structure D on Figure 29 are interpreted to extend to depths of ~11,000 ft and are the shallowest faults observed in the area. Compressional faulting is attributed to east-west directed shortening during the Pennsylvanian-Permian age Alleghanian orogeny (see subsection 2.1.6 for further discussion).

Overall, Paleozoic age faults observed in the area range between 1,700 and 4,500 feet below the top of the Medina Group and the confining zone of the Rochester Shale Formation (Figure 29). Based on available seismic reflection data, fault-related folds are present as shallow as the Onondaga Limestone Formation (D on Figure 29); however, the Medina Group interval lies above any observable faulting. Further seismic data collection and interpretation, geomechanical evaluation, structural modeling, and fault seal risk analysis will be performed, as appropriate, for the CarbonSAFE project to evaluate containment risk in the Medina Group and Knox Group injection zones.

Wickstrom & Gray (1988) confirm that fractures and fracture networks are present within the Trenton Group, across Northwestern Ohio. Defining the geometry and character of fractured intervals within the AoR and a detailed understanding of their impact on fluid migration will require the collection of geophysical, well, and core data associated with this permit application (see the discussion of data collection related to geomechanics in subsection 2.5.7 below). These data collection efforts and associated studies will further our understanding of fault stability and examine the possibility that fracture networks may provide preferential fluid flow conduits. Additional uncertainties in the identification of faults or geologic structures not identified on the available 2D seismic reflection data will be addressed in the collection of 3D seismic and well data under the CarbonSAFE Initiative.

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2.4. Injection and Confining Zone Details [40 CFR 146.82(a)(3)(iii)]

The stratigraphy in the project area is composed of ~12,000 ft of sediments on top of Precambrian basement, ranging in age from Cambrian up to Pennsylvanian (Virgilian) at the surface (Figure 30). Freshwater aquifers occupy porous units within the Pennsylvanian and Upper Mississippian, and historic oil production has been largely from Lower Mississippian sandstones. Recently, unconventional oil and gas production has been established in the Middle Devonian and Upper Ordovician.

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System	Series	Stratigraphic Unit (Group or Major Formation)	Aquifer, Confining Zone, or Reservoir	Prod. (Oil, Gas)	Average Depth (ft)	Average Thickness (ft)	TB1-1 Depth (ft TVD)	TB1-1 Thickness (ft)	TB1-2 Depth (ft TVD)	TB1-2 Thickness (ft)	TB1-3 Depth (ft TVD)	TB1-3 Thickness (ft)	TB1-4 Depth (ft TVD)	TB1-4 Thickness (ft)
Pennsylvanian		Pennsylvanian (undivided)	Freshwater Aquifers											
Pennsylvanian		Pottsville Group (Base Sharon Mbr)	Lowest USDW		855		~755		~720		~900		~1,050	
Mississippian	U	Greenbriar Ls Fm	*Seal (Limestone)*											
Mississippian	Lower	Pocono Grp – Big Injun SS	Conventional Oil Reservoir	●●										
Mississippian	Lower	Pocono Grp – Sunberry Sh	*Seal (Shale)*											
Mississippian	Lower	Pocono Grp – Berea SS	Conventional Oil Reservoir	●●										
Devonian	Upper	Ohio Shale Grp	*Seal (Shale)*			3,093		↑ ~2,990 Thick ↓		↑ ~3,070 Thick ↓		↑ ~3,160 Thick ↓		↑ ~3,150 Thick ↓
Devonian	Upper	Olentangy Shale Fm (*Tully Ls*)	*Seal (Shale)*											
Devonian	Middle	Hamilton Grp – Mahantango Shale Fm	*Seal (Shale)*											
Devonian	Middle	Hamilton Grp – Marcellus Shale Fm	Unconventional Oil Reservoir	●●										
Devonian	Middle	Onondaga Ls Fm	*Seal (Limestone)*		3,741	185	3,741	190	3,787	174	4,064	188	4,200	189
Devonian	Lower	Oriskany SS Fm	Conventional Oil/Gas Reservoir	●●	3,931	11	3,931	11	3,960	13	4,252	11	4,389	9
Devonian	Lower	Helderberg Grp	*Seal (Limestone)*		3,942	206	3,942	234	3,973	225	4,263	199	4,398	166
Silurian	Upper	Bass Islands Dolomite Grp	*Seal (Dolomite)*		4,175	53	4,175	50	4,198	55	4,462	50	4,564	58
Silurian	Upper	Salina Grp – Salina "D" – "G"; Salina "A" – "C"	**Upper Confining Zone (Evaporite/Salt)**		4,225	848	4,225	794	4,253	824	4,512	853	4,622	920
Silurian	Upper	**Lockport Dolomite Grp** ①	**Possible Injection Zone**		5,024	290	5,024	300	5,076	290	5,364	279	5,541	293
Silurian	Upper	Clinton Grp – Rochester Shale Fm; Dayton/Keefer Fm	**Middle Confining Zone**		5,324	241	5,324	233	5,366	249	5,643	249	5,834	235
Silurian	L	**Medina (Tuscarora SS) Grp** ② *Informal – "Clinton" & "Medina" sands*	**Injection Zone**	●●	5,557	171	5,557	165	5,615	160	5,892	169	6,069	191
Ordovician	Upper	Queenston Shale (Juniata Fm)	**Lower Confining Zone**		5,722	↑	5,722	↑		↑		↑		↑
Ordovician	Upper	Utica Shale Fm	Unconventional Oil Reservoir	●●		2,547		2,500	5,775	2,583	6,060	2,551	6,260	2,555
Ordovician	Upper	Trenton Grp	*Seal (Limestone)*											
Ordovician	Upper	Black River Ls Grp	*Seal (Limestone)*			↓		↓		↓		↓		↓
Ordovician	M	Wells Creek Fm	**Upper Confining Zone**		8,222	97	8,222	83	8,357	98	8,611	99	8815	108
Ordovician	L	Knox Grp – Beckmantown Dolomite	**Upper Confining Zone**	●●	8,305	256	8,305	199	8,455	238	8,711	253	8923	335
Cambrian	Upper	Knox Grp – **Rose Run SS** ③	**Injection Zone**	●●	8,505	103	8,505	70	8,693	93	8,963	100	9258	150
Cambrian	Upper	Knox Grp – Copper Ridge Dolomite Fm	**Lower Confining Zone**	●●	8,575	361	8,575	384	8,786	364	9,063	359	9407	337
Cambrian	Upper	Conasauga Group	*Lowest Seal/Confining Unit*		8,959		8,961		9,149		9,422		9740	

Figure 30: Generalized stratigraphic column for the project. Possible Injection Complex: Lockport Injection Complex: 1; proposed Primary Complexes: Medina Injection Complex: 2; and Knox Injection Complex: 3. (*Depth is to the top of the Stratigraphic Unit (SU), except where noted.) Modified from Childs, 1985; Patchen et al., 1985b; Riley et al., 2010; Wickstrom et al., 2010; WVGES, 2019.

Subsurface analysis in the project area indicates several stacked, porous reservoirs with suitable confining seals for sequestration. These intervals exist beneath the 2,800 ft TVD threshold for storage of supercritical CO_2 (sCO_2) and are, likewise, greater than 1,000 vertical feet from known producing oil reservoirs. Three potential injection complexes, each composed of an upper confining zone, a lower confining zone, and an injection zone, have been identified (Figure 30). All three will be evaluated after data collection and evaluation from the CarbonSAFE stratigraphic wells in the region. The upper injection complex is the Lockport Injection Complex (LIC – 1 on Figure 30); it is a potential secondary target and was not modeled for this permit application. Additionally, there are two primary injection complexes proposed in this application: the Medina Injection Complex (MIC – 2 on Figure 30), the middle injection complex, and the Knox Injection Complex (KIC – 3 on Figure 30), the lower injection complex. Throughout this permit application, when referring to the entire injection complex, the nomenclature outlined above will be used, and when describing or indicating specific intervals, the Group, Formation, or appropriate formal interval (i.e., “Shale” or “Sandstone”) name will be used.

2.4.1. Upper Injection Complex: Lockport Injection Complex (LIC)

The LIC is composed of, from top to base: the Salina Group, which forms the primary confining zone, the Lockport Dolomite Group, which is the objective injection zone, and the Rochester Shale Formation, which forms the basal confining zone. All three stratigraphic units are Upper Silurian in age (Figure 30). This injection complex was included as a secondary injection complex due to the initial evaluation of the reservoir by the offset data. Should new data collection change the evaluation of this interval to be considered suitable for injection, its status will change.

2.4.1.1. LIC Primary Confining Zone: Salina Group

The Salina Group is a series of regionally extensive interbedded shales, dolomites, and evaporites (Figure 31). These deposits extend across the Appalachian and Michigan basins and provide the seal for Niagaran oil and gas reef trends in the Michigan Basin (Carter et al., 2010; Coyle, 2022). Original subdivision of the units “A-G” was identified by Landes (1945) in the Michigan Basin and correlated to the Appalachian Basin by Ulteig (1964) and Rickard (1969). They were deposited in a restricted marine (A-G) to sabkha/peritidal and supratidal environment (D-G) as a result of the paleogeographic location in tropical latitudes, an arid long-term paleoclimate, and isolation/rain shadow from orogenic uplift (Clifford, 1973; Ettensohn, 2008).

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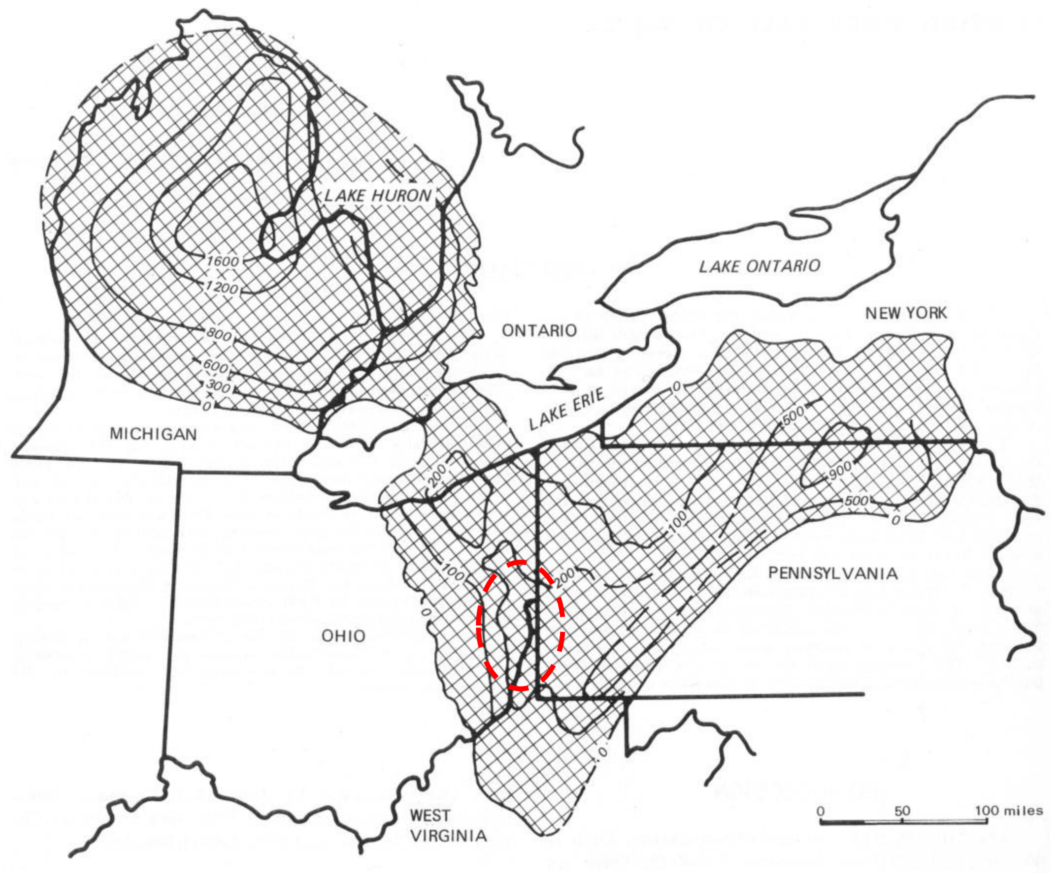

Figure 31: Regional extent and thickness of the Salina Group salt beds modified from Clifford (1973). The red dashed circle is the approximate location of the Tri-State CCS Hub (map contour interval varies).

The Salina Group, named for the halite in this section, is divided into two intervals. The lower interval, called the "A-C" units in Ohio, is known as the Vernon in New York and the upper Wills Creek in West Virginia (Rickard, 1969; Janssen, 1977; Coyle, 2022). In the project area, this interval is composed predominantly of dolomite and shale beds, though some salt beds are present outside the area. The overlying "D-G" units are a thick section dominated by salt, evaporites, and Figure 32 shows a cross-section from the Humble #1 Minesinger Well in Hancock County to the E. & W. #1 Peck well in Erie County, Ohio, and Figure 33 shows a SW-NE cross section from Tuscarawas Co., Ohio to Ashtabula Co., Ohio. These cross-sections demonstrate that the "D" and "E" intervals have laterally continuous salt beds, and the "F" interval has numerous, thick, and laterally continuous salt beds in the project area. The total salt can reach thicknesses of 200+ ft in the project area and in the AoR (Figure 34; Clifford, 1973; Carter et al., 2017).

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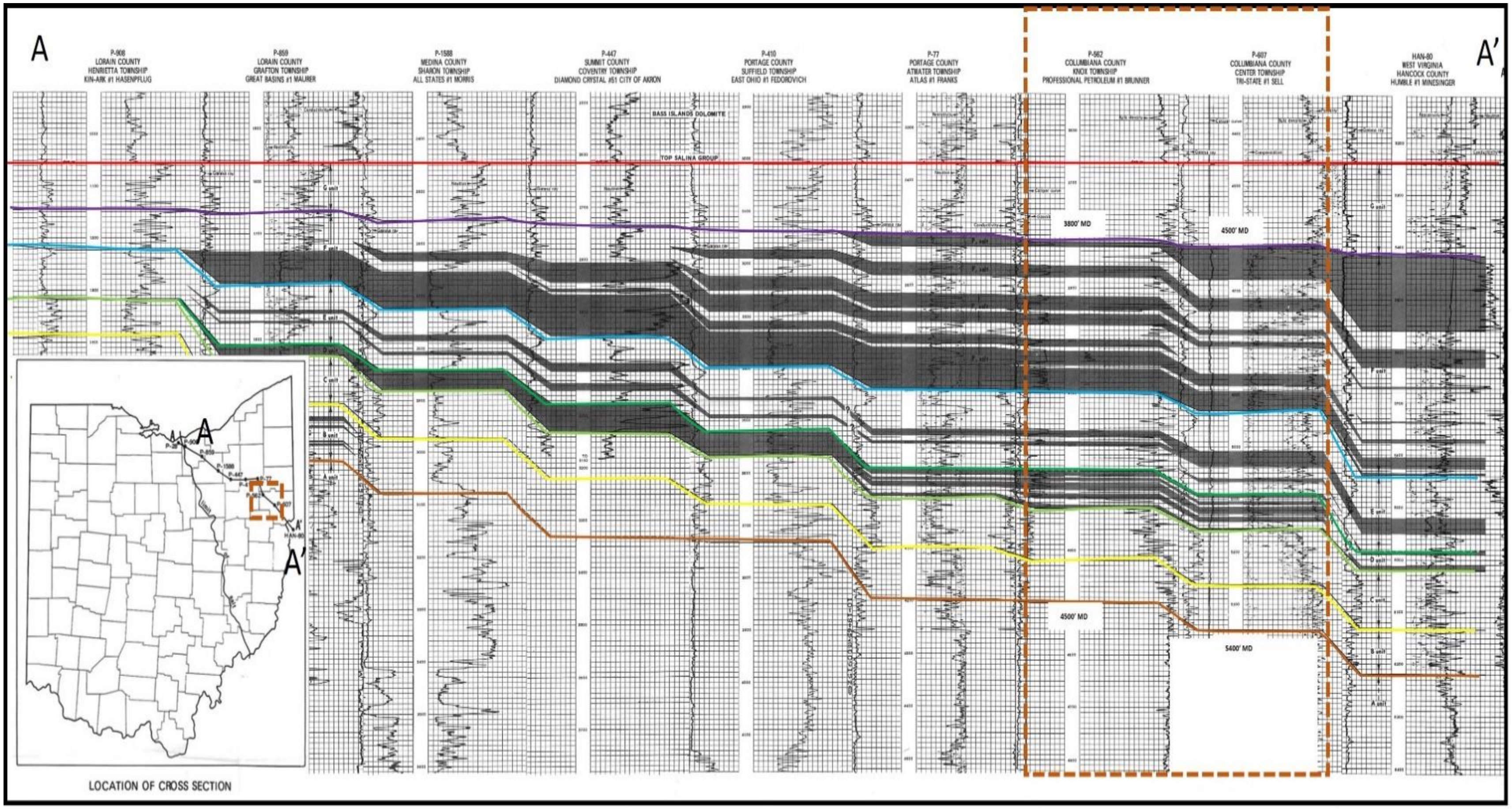

Figure 32: SE-NW stratigraphic cross-section from Erie, County OH, to Hancock County, WV referenced to the top of the Salina Group. The dashed orange box is the area northeast of the proposed well sites. Depths called out at the adjacent wells for the Top Salina and Top "A" interval. Modified from Clifford, 1973. From Top to Base: The Top "G" unit (red), the Top "F" unit (Purple), the Top "E" unit (blue), the Top "D" unit (dark green), the Top "C" unit (light green), the Top "B" unit (yellow), the Top "A" unit (orange). Well APIs from left to right: 34093209080000, 34093208590000, 34103215880000, 34153204470000, 34133204100000, 34133200770000, 34029205620000, 34020206070000, 47029000800000.

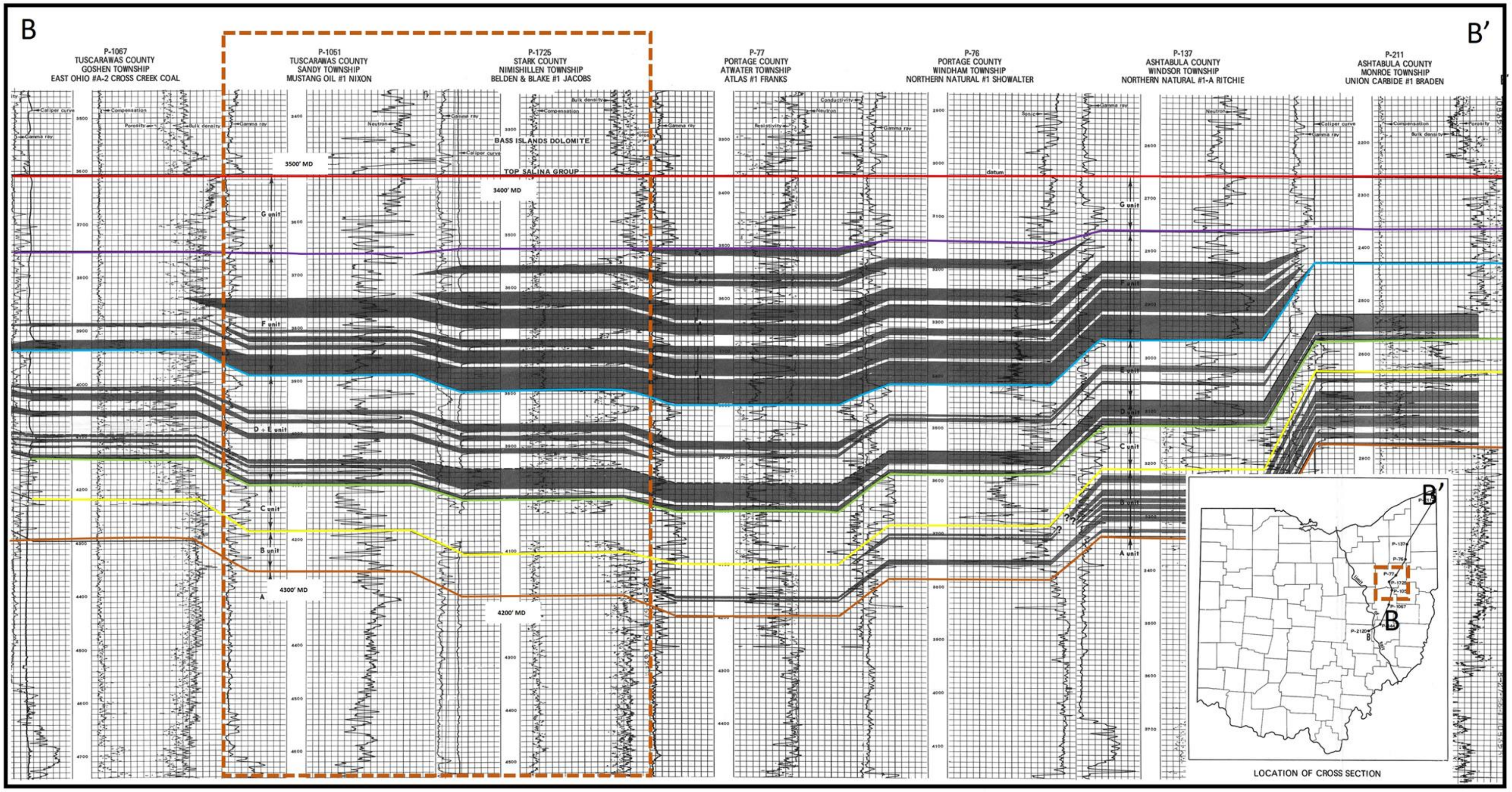

Figure 33: SW-NE stratigraphic cross-section from Tuscarawas County, OH, to Ashtabula County, OH referenced to the top of the Salina Group. The dashed orange box is the area west-northwest of the proposed well sites. Depths called out at the adjacent wells for the Top Salina Group and Top "A" interval. Modified from Clifford, 1973. From Top to Base: The Top "G" unit (red), the Top "F" unit (Purple), the Top "E+D" unit (blue), the Top "C" unit (light green), the Top "B" unit (yellow), the Top "A" unit (orange). Well APIs from left to right: 34157210670000, 34157210510000, 34151217250000, 34133200770000, 34133200760000, 34007201370000, 34007202110000.

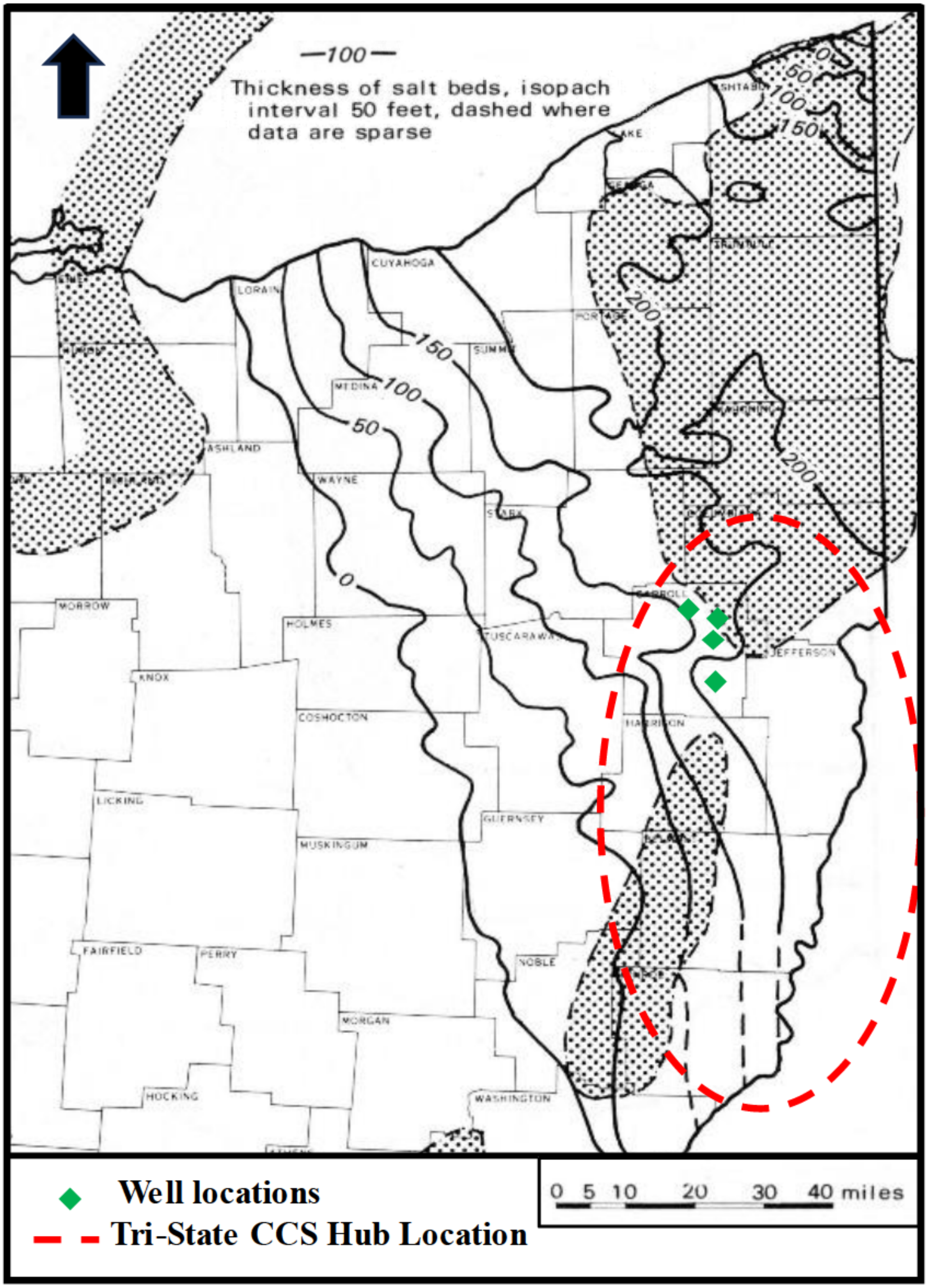

Figure 34: Total Salina Group salt thickness map in the Tri-State CCS Hub region (red dashed oval) and well locations (green diamonds). Modified from Clifford, 1973.

There are multiple lines of evidence that support that the Salina Formation serves as an effective long-term seal for CO_2 injection. First, historical data from the oil and gas industry show that evaporites, such as those found in the Salina, have consistently acted as competent long-term seals; 14 of the world's 25 largest oil fields and 9 of the world's 25 largest gas fields are sealed by evaporites, despite evaporites constituting less than 2% of the world's sedimentary rocks (Warren, 2017). Additionally, a widely accepted guideline in the oil and gas industry suggests that a halite bed can function as a seal if it is at least 20 m (65.6 ft) thick. This is corroborated by the low permeabilities observed in evaporites, with halite typically exhibiting permeabilities on the order of 10^{-7} md and anhydrite around 10^{-5} md (Beauheim and Roberts, 2002).

Furthermore, studies have identified beds in the F salt of the Salina Group as possessing both the requisite halite purity and thickness (over 100 ft) necessary for solution mining and long-term storage of natural gas liquids in the relevant area (Carter et al., 2017). Lastly, the distinct geochemical fingerprint observed between regional petroleum systems younger than the Salinan evaporites and those predating them further bolster the argument for the Salina's efficacy as a long-term seal (Cole et al., 1987; Drozd and Cole, 1994; Swezey, 2002; Ettensohn, 2008).

Available core analyses from the MRCSP-FENGENCO 1 well (API# 3401320586; Figure 20; Table 2; subsection 2.5.1) in Belmont County, Ohio are primarily from dolomite intervals in units A, B, F, and G of the Salina Group (Figure 35). There are no core measurements from the actual salt layers. Permeabilities from these cores range from <0.01 to 2.45 md (average 0.3 md), and measured porosities range from <1.0% to 13% (average 6.6%). These units are stratigraphically older than the laterally continuous F salt of the Salina Group (Figure 32 and Figure 33) and do not put containment at risk. Further discussion of the petrophysics continues in subsection 2.5 of this Application Narrative.

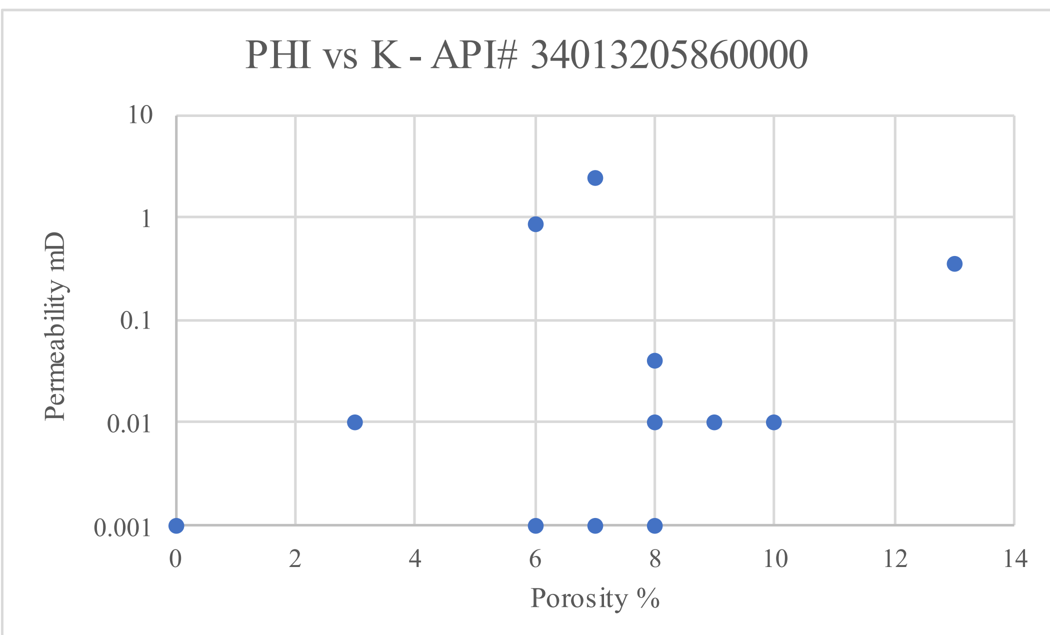

Figure 35: Core measured Porosity vs. Permeability from the Salina Group in MRCSP FENGENCO 1 well (API # 34013205860000; well location is shown in Table 2).

In the project area, the Salina Group ranges in depth from -2,100 ft (SSTVD) in the northwest and dips to the southeast to a depth of -4,100 ft SSTVD (Figure 36). The Salina Group has an average thickness of 888 ft across the project area (Figure 36) with thickening east of the proposed injection sites, corroborating Clifford (1973). The total Salina interval is at a total measured depth of approximately 4,220 ft to 4,620 ft TVD and has a total thickness range of 800 to 920 ft at the proposed injection well sites.

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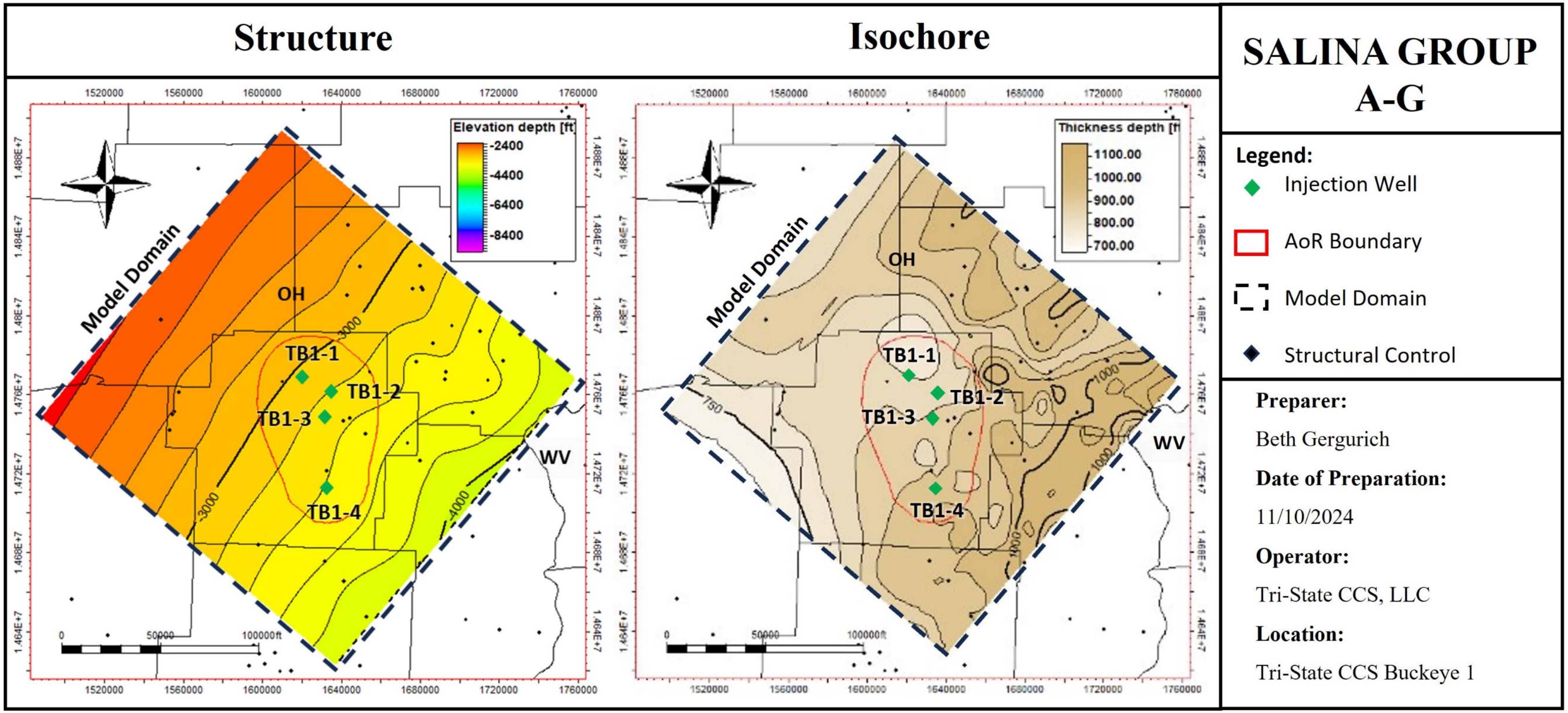

Figure 36: Top Structure (right) and isochore(left) of the Salina Group A-G interval (Structure C.I. = 200'; depths SSTVD; Isochore C.I. = 50') with the four potential injection sites shown in Carroll County, Ohio. The static model domain is shown as a black dashed line.

2.4.1.2. LIC Primary Injection Zone: Lockport Dolomite Group

The primary injection zone for the LIC is the Lockport Dolomite Group. The Lockport Dolomite Group, sometimes referred to as the McKenzie Formation (Horvath, 1970), is aerially extensive across the Appalachian Basin region and into Michigan (called the Niagara Group) and was deposited in similar paleogeographic, eustatic, and tectonic conditions to the Salina Evaporites (see subsection 2.4.1.1 above; Carter et al., 2010; Ettensohn, 2008).

Regionally, the Lockport Dolomite Group dips to the southeast and has an average thickness range of 150 ft to 300 ft. A study in Eastern Ohio measured the maximum thickness of the Lockport at ~400 ft adjacent to the project area (Gupta et al., 2020; Wickstrom et al., 2010; Janssens, 1970; Carter et al., 2010). At the proposed injection sites, the Lockport Dolomite Group has a thickness of approximately 290 ft and occurs at depths between -3,800 ft and -4,400 ft SSTVD (Figure 38).

This relatively thick section of carbonate is composed of a fine to coarsely crystalline, fossiliferous, slightly argillaceous dolostone, accumulated in a shallow epicontinental sea that stretched westward from New York to Ohio and south to Kentucky, extending along the Cincinnati-Findlay-Algonquin axis into the basins of Indiana, Illinois, and Michigan (Carter et al., 2010; Ettensohn, 2008). Carter et al. (2010) identified seven lithofacies types in core from the Lockport Dolomite Group, all indicative of shallow subtidal to nearshore deposition (Figure 37):

1. mixed intertidal to supratidal dolomite (with a mixed gray biostromal subfacies)
2. interreef or interbioherm dark dolomite
3. grainstone – shoals, banks, reef flanks, and inter-reef sediments
4. biohermal dolomite (reefs, bioherms, and patch reefs)
5. subtidal crinoidal dolomite
6. quartzose dolomite associated with barrier island
7. shallow subtidal shaley dolomite

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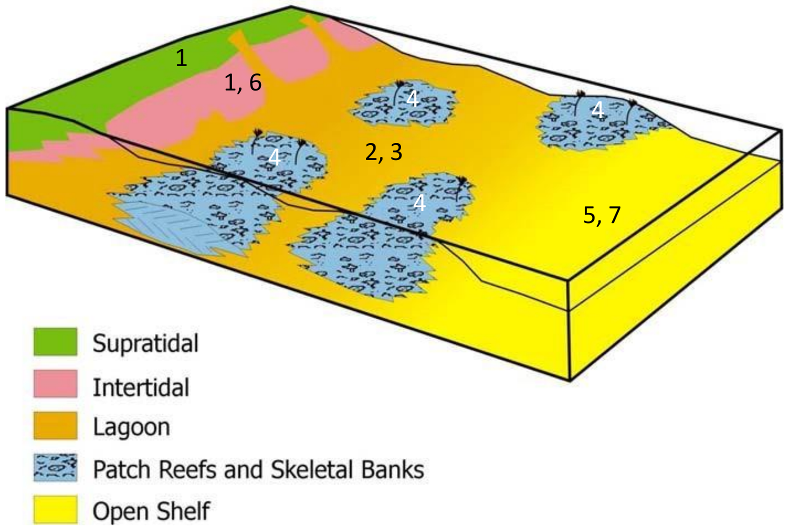

Figure 37: Cartoon depicting the regional facies patterns interpreted for the Lockport Dolomite in the Appalachian Basin. Numbers reflect the described facies in the text. Modified from Smosna et al., 1989.

Detailed core analysis was not available for the Lockport Dolomite Group near the proposed injection well sites. A study (Carter et al., 2010) of several cores in Mercer County, Pennsylvania and Caroll County, Ohio, as a part of the MRCSP Phase II Topical Report evaluating the CO_2 sequestration potential in the middle Devonian to the middle Silurian formations in the Appalachian Basin, was used to characterize the reservoir (locations shown in Figure 20 and Table 2; subsection 2.1.12).

Porosity types in the Lockport Dolomite Group include vuggy, moldic, inter/intraparticle, and intercrystalline porosity (Carter et al., 2010; Wickstrom et al., 2010). Early eogenic and syngenic diagenesis facilitated the creation of vugs and moldic pore textures, though much of the secondary porosity has been lost through burial diagenesis. Core and log analysis measure an average of 9% porosity in vuggy dolomites and between 1 and 3.5% in dolomites characterized with intracrystalline porosities. Average permeabilities in Lockport dolomites with intercrystalline permeability are measured at <0.1 md, and vuggy permeability averages 3 to 10 md but can be as high as 55 md (Carter et al., 2010; Wickstrom et al., 2010). Fracture porosity and permeability are present in the Lockport Dolomite Group as well, enhancing reservoir petrophysics (Wickstrom et al., 2010). Cyclic stacking of reservoir facies in response to sea-level fluctuations yields opportunity for multiple disposal zones in the Lockport Dolomite Group (Figure 27, Figure 28, and Figure 54). Site-specific petrophysical analysis is discussed in subsection 2.5.2 of this Application Narrative.

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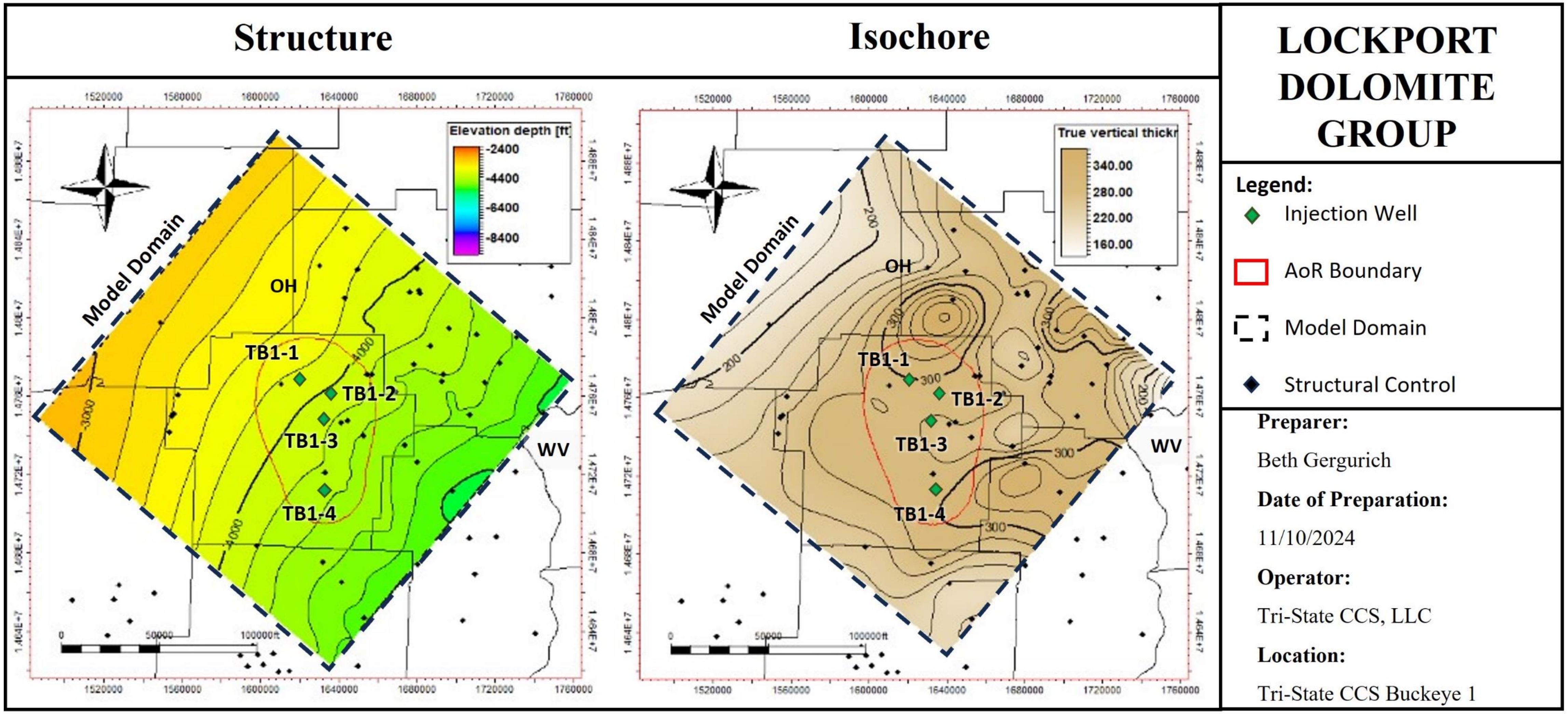

Figure 38: Top Structure (right) and isochore(left) of the Lockport Dolomite Group interval (Structure C.I. = 200'; depths SSTVD; Isochore C.I. = 20') with the four potential injection sites shown in Carroll County, Ohio. The static model domain is shown as a black dashed line.

Measurements from four sidewall core samples in the Lockport Dolomite Group identify the mineralogy to be predominantly dolomite with minor quartz and Illite (Table 3). Carter's 2010 study also documented pyrite and pyrobitumen, likely from diagenesis, in the sidewall core samples. The reactivity of the Lockport Dolomite Group mineralogy with the CO_2 stream is further addressed in subsection 2.8.2.1 of this Application Narrative.

Table 3: XRD results for sidewall core samples of the Lockport Dolomite Group from the Ocel #1 well, Carroll County, Ohio (Carter et al., 2010). Location is in Figure 20.

Sample	Percent of Total Composition										
Depth MD (ft)	Quartz	K-Spar	Plag.	Pyrite	Dol/Ank	Chlorite	Kaolinite	Illite	Smectite	Calcite	Siderite
5,422	13	0	0	1	84	Trace	0	2	0	0	Trace
5,436	1	0	0	1	97	Trace	0	1	0	0	Trace
5,460	1	0	0	1	96	Trace	0	2	0	0	Trace
5,468	Trace	0	0	1	98	Trace	0	1	0	0	Trace
Avg.	4	0	0	1	94	Trace	0	1	0	0	Trace

2.4.1.3. LIC Primary (lower) Confining Zone: Rochester Shale Formation

The Rochester Shale Formation, known to drillers as the "Clinton Shale," lies below the Lockport Dolomite Group and serves as the basal confining zone to the LIC, as well as the upper confining zone for the MIC discussed in subsection 2.4.2 below.

In West Virginia, Woodward (1941) identified the Rochester as the upper section of the Clinton Group. He and Folk (1962) characterized the shale as gray to black in color, thin-bedded, fissile, or platy, and interspersed with occasional dense, fossil-rich blue-gray micritic-biosparite limestone, deposited in a lagoonal environment associated with the time-correlative Keefer sandstone barrier bar. In New York and Ontario, Brett (1983) described the Rochester as a gray, fossiliferous, shaley mudstone with abundant interbedded carbonates indicative of storm-wave action on the southwards facing slope. He correlated it west to eastern Ohio and Kentucky where it grades into an argillaceous dolostone referred to as the "Bisher" in the literature (Horvath, 1969; Janssens, 1977). Janssen (1977) notes that the shale in the Rochester thins and becomes virtually absent near the western boundary of Hancock County. Here, it is underlain by the Dayton Formation: a non-argillaceous slightly glauconitic dolomite, though the GR log from the Minesinger 1 well indicates a thick shale with thin dolomite beds.

Subsurface log correlations show the shale is an average of approximately 245 ft thick in Carroll County, Ohio (Figure 39), and across the model domain, the top of the Rochester Shale ranges in depth from -3,200 to -5,400 ft (SSTVD) (Figure 39).

Porosity in the formation is generally less than 3%, and permeability is similar to other shales at less than 1×10^{-6} md (Mudd et al., 2003). Given the lateral continuity and the impermeability of the shales, the Rochester Shale and its time-equivalents in the project area should serve as an effective base confining zone for the LIC and upper confining zone for the MIC.

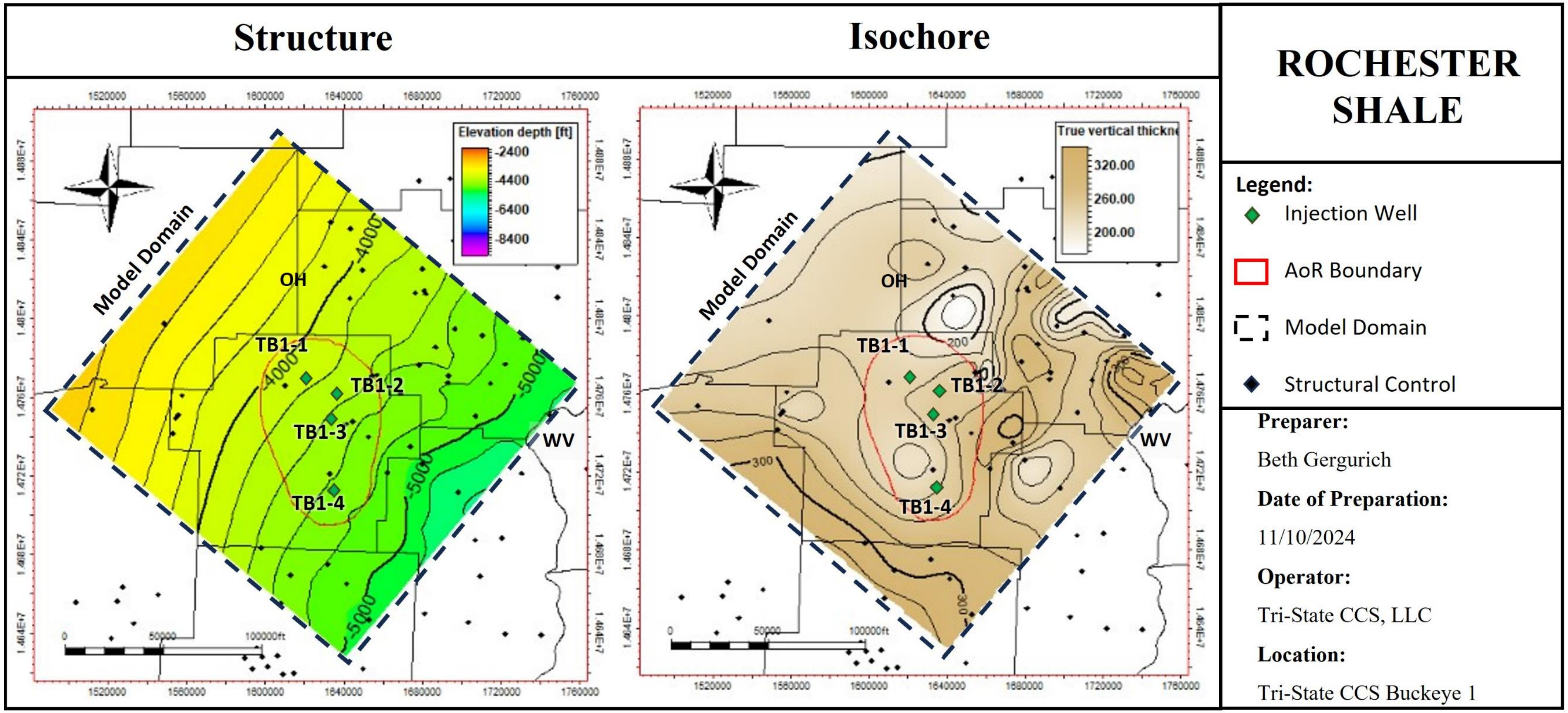

Figure 39: Top Structure (right) and isochore (left) of the Rochester Formation interval (Structure C.I. = 200'; depths SSTVD; Isochore C.I. = 20') with the four potential injection sites shown in Carroll County, Ohio. The static model domain is shown as a black dashed line.

2.4.2. Middle Injection Complex: Medina Injection Complex (MIC)

The MIC is composed of three units. The Upper Silurian Rochester Shale Formation forms the upper seal and confining zone (Figure 21). The Medina Group, which is a series of stacked sandstones in the Lower Silurian, is informally referred to as the "Clinton" sandstone and is the projected injection zone(s) (Wickstrom, 2010). At the base, the thick, Ordovician-aged Queenston Shale/Juniata Formation, comprises the lower confining member of the MIC.

2.4.2.1. MIC Primary (upper) Confining Zone: Rochester Shale

The upper confining zone for the MIC is the same basal confining unit for the LIC and is addressed in subsection 2.4.1.3 above.

2.4.2.2. MIC Primary Injection Zone: Sandstone in the Medina Group

The correlation of sandstones in the Lower Silurian of the Appalachian Basin historically has been problematic due to nomenclature inconsistencies in stratigraphic terminology from state to state. Multiple names for age-equivalent zones (Figure 40) in the literature have led to confusion and cross-correlation of stratigraphic units. Sandstones in this interval have been referred to as Tuscarora, Grimsby, Whirlpool, and informally the "Medina" and "Clinton" sandstones, the latter including drillers' terminology.

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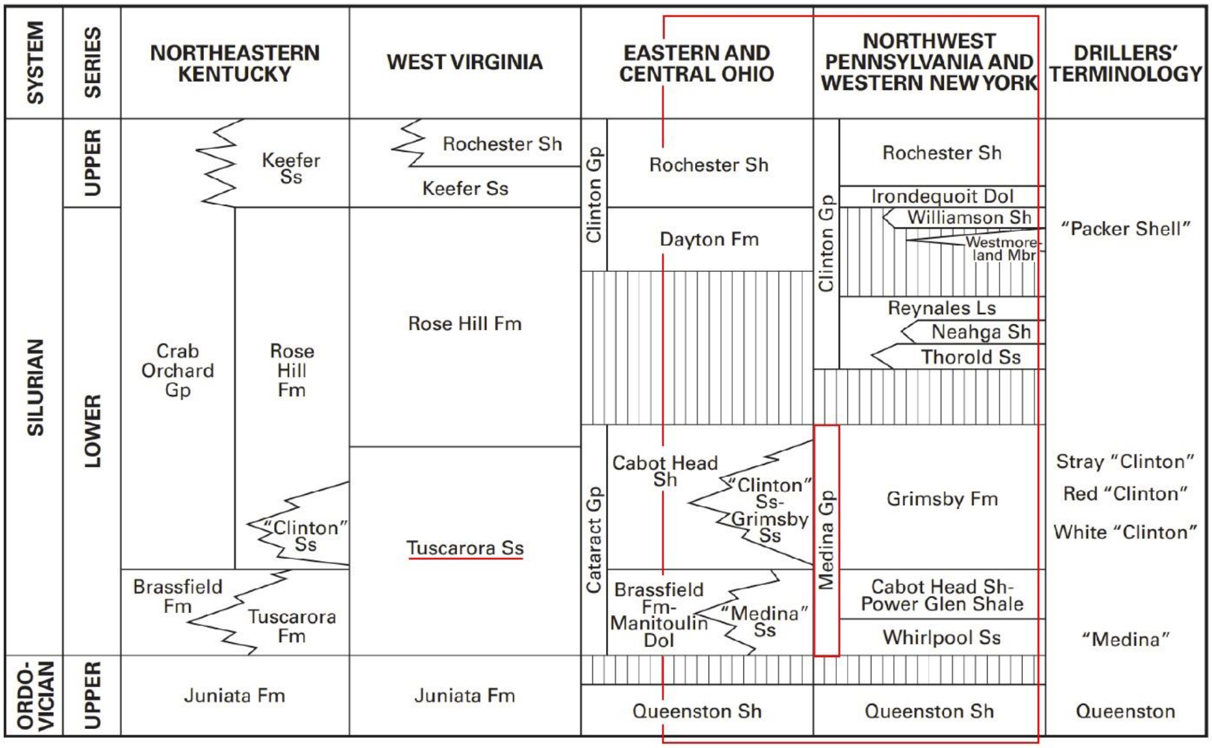

Figure 40: Stratigraphic correlation chart for the project area illustrating varying terminology for age equivalent sands. For this permit, the nomenclature for Eastern Ohio is recognized, and the interval is referred to as the Medina Group (Riley et al., 2010).

For the purpose of this permit application, the MIC injection interval will be referred to as the Medina Group of Eastern Ohio and northwest Pennsylvania. The Medina Group is composed of the Whirlpool Sandstone, the overlying Cabot Head Shale, and the interfingering Grimsby ("Clinton" and "Medina") reservoir sandstone(s), as is illustrated by the type log by Riley et al. (2010) from Eastern Ohio in Figure 41.

The Medina Group is an unconformity-bound wedge of Lower Silurian clastics deposited in the Appalachian foreland basin. These deposits represent a low frequency (3^{rd} or 4^{th} order) cycle of deposition in which transgressive and high-stand systems tracts are preserved (Castle, 1998). The lower approximate one-half of the Medina Group is composed of the Whirlpool (Medina) Sandstone and the Lower Cabot Head (Power Glen) Shale and is recognized as the transgressive systems tract (TST) for this cycle. The Whirlpool transgressive sandstone is composed of white to light gray, red, fine to very fine-grained quartzose sand that is moderately to well sorted (Wickstrom et al., 2010). This sandstone is gradational up into the Lower Cabot Head Shale and is recognized by the increase in gamma ray response on logs (Figure 41). The Lower Cabot Head Shale is dark green to black, marine shale, with thin quartzose, silt and sand laminations that increase in number and thickness towards the upper part of the unit (Wickstrom et al., 2010). The Lower Cabot Head Shale interval is interpreted to represent marine deposition on the shelf during continued eustatic sea-level rise. Sandstone beds do occur in this unit, particularly eastward towards the Taconic highlands, but are of more local extent and probably storm-deposited shelf bars formed below the normal wave base (Castle, 1998).

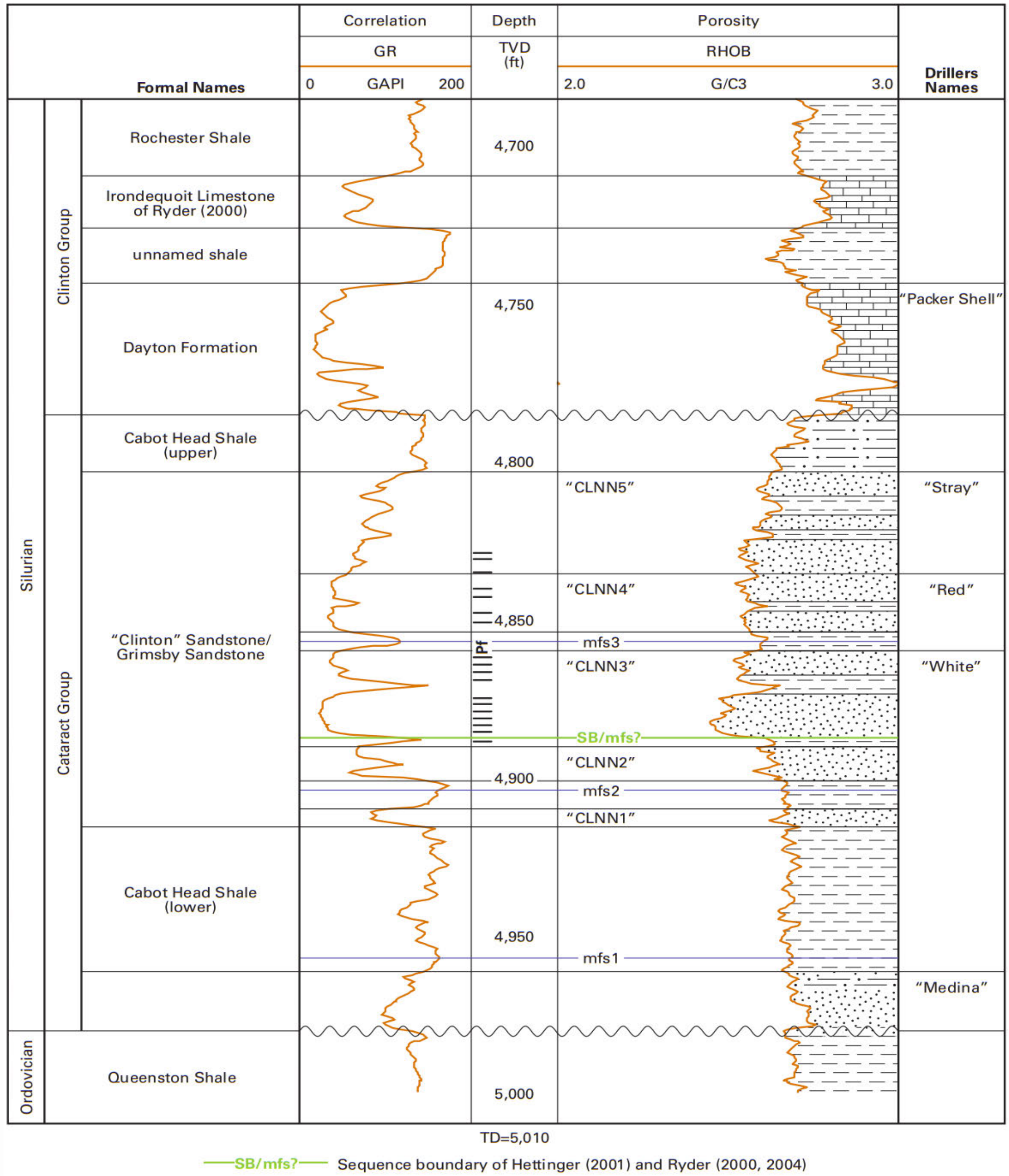

Figure 41: Type log from Riley et al., 2010, of the stratigraphy in the East Canton oil field in Stark County, Ohio (location shown in Table 2; Figure 21) which directly translates to the project area. The Cataract Group correlates to the Medina Group, as shown in above. Clinton sand intervals identified by the abbreviation "CLNN," wavy line indicates an unconformity surface, and maximum flooding surfaces identified by "mfs.".

The upper one-half of the Medina Group is represented by the Grimsby ("Clinton") Sandstone and overlying Upper Cabot Head Shale and is recognized as the high-stand systems tract (HST) for this cycle. The sandstones in the Grimsby Formation are composed of very fine to medium-grained, monocrystalline, quartzose rocks with silty shale interbeds (Wickstrom et al., 2005). The upward, rapidly gradational, change from the Lower Cabot Head Shale into the sandstone rich Grimsby Formation is due to uplift and erosion along the Taconic highlands to the southeast, which initiated a forced regression into the HST. These sandstones were deposited in marine, shoreface/shoreline, and deltaic environments in response to episodic northwest progradation and shallowing, associated with relative base-level drop across the project area (Castle, 1998; Wickstrom et al., 2010). The Upper Cabot Head Shale is composed of argillaceous sandstones and muds interpreted to be intertidal, coastal plains deposits (Castle, 1998). These sediments mark the final shallowing of the Medina Group prior to exposure at the top of the unit; i.e., pre-Dayton Formation transgression.

The Medina Group has multiple sandstone targets for sequestration with interbedded confining zones that segregate the sands into individual flow-units (Figure 40 and Figure 41). The basal Whirlpool Sandstone is typically of poor reservoir quality due to carbonate and dolomite cement (Riley et al., 2010) and is not discussed here; however, this interval will be evaluated for injection viability in the CarbonSAFE stratigraphic test wells and during pre-operational testing. The Grimsby/ "Clinton" sandstones are the objective injection intervals based on their rich history of oil and gas production, from Eastern Ohio to Northwestern Pennsylvania.

The "Clinton" sandstones are typically "tight" with respect to porosity and permeability due to early cementation, primarily by silica (quartz overgrowths) as well as accessory hematite, chlorite, carbonate, and evaporite minerals. Porosity is variable based on their heterolithic sand facies. Porosity types include relict primary porosity to microporosity, intra constituent, and secondary porosity from the dissolution of unstable cement components (Wickstrom et al., 2010; Riley et al., 2010). Wickstrom and others (2005) reported a porosity range of 2 to 23% in the "Clinton" sands, with an average of 7.8%. Measurement from core data near the project area yields an average porosity of ~5%, and permeabilities average ~10 md. Reported permeabilities within the sandstones range from less than 0.1 md to 40 md, although some producing oil fields averaged 100 md with peaks in excess of 200 md (Wickstrom et al., 2010). Fracture porosity and permeability exist, but distribution is poorly understood (Riley et al., 2010). Based on historic oil and gas production, as well as gas storage in "Clinton" sandstone reservoirs, the Medina Group holds good potential for sequestration of miscible CO_2 but due to lithologic variations, detailed characterization of sands will be needed and will be addressed in the pre-operational testing.

Framework grain analysis of rotary sidewall cores from the Ohio Division of Geological Survey CO_2 No. 1 well in Tuscarawas County, Ohio (location and API shown in Figure 21 and Table 2), west of the AoR (Wickstrom et al., 2011), classify the Medina Group injection interval (referred to as the Clinton) as a Quarzarenite/Sublitharenite with minor feldspar and lithic fragments (<8%) (Table 4). Cement accounts for 14-18% of the total point count and are predominantly quartz overgrowths with secondary pore filling clays. XRD analysis corroborates the framework grain analysis with 85-92% quartz, 5-13% predominantly non-swelling clays, and minor percentages of other minerals (Table 5). This analysis suggests that there are few mineral constituents that will react with the injected CO_2 stream, though the literature suggests the cements are variable: e.g., quartz, hematite, and carbonate, which may cause dissolution and precipitation of different mineral species. In addition, mineralogic information specific to the project area will be collected during pre-operational testing and as a part of the data collection for the CarbonSAFE stratigraphic wells.

Table 4: Framework Grain Analysis for the Medina Group at the Ohio Division of Geological Survey CO2 No. 1 well in Tuscarawas County, Ohio (location shown in Figure 21 and Table 2). Modified from Wickstrom et al., 2011.

Measured Depth (ft):	4,771	4,790	4,840
Sample Number:	1-3R	1-5R	1-9R
Grain Size Avg (mm):	0.1	0.11	0.15
Grain Size Range (mm):	<0.01-0.32	<0.01-0.38	0.03-0.32
Sorting:	Moderately well	Moderate	Well
Rock Type:	Quartzarenite	Sublitharenite	Sublith./Subark.
Quartz:	68%	51%	68%
Feldspar:	1%	3%	2%
Lithic FR:	1%	4%	2%
Accessory Grains:	Trace	2%	1%
Environmental Indicators:	2%	3%	Trace
Detrital Matrix:	5%	16%	0%
Cement/Replacement:	18%	14%	18%
Porosity:	5%	6%	9%
TOTALS:	**100%**	**99%**	**100%**

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Table 5: XRD analysis (weight %) for rotary sidewall core (RSWC) collected in the Medina Group at the Ohio Division of Geological Survey CO2 No. 1 well in Tuscarawas County, Ohio (location shown in Figure 21 and Table 2). Modified from Wickstrom et al., 2011.

Measured Depth (ft):	4,771	4,790	4,840
Sample Number:	1-3R	1-5R	1-9R
Chlorite	1%	3%	1%
Kaolinite	1%	1%	Trace
Illite	3%	8%	4%
Mixed Illite/Smectite	Trace	1%	Trace
Total Clay	**5%**	**13%**	**5%**
Calcite	Trace	Trace	0%
Dol/Ank	0%	Trace	2%
Siderite	Trace	Trace	Trace
Total Carbonates	**Trace**	**Trace**	**2%**
Quartz	92%	85%	90%
K-spar	1%	1%	1%
Plag.	1%	1%	1%
Pyrite	1%	Trace	1%
Hematite	Trace	0%	0%
Barite	0%	0%	0%
Total Other Minerals	**95%**	**87%**	**93%**

Based on the static model, the top of the Medina Group in the project area ranges in depth from –3,400 ft (SSTVD) to the northwest to –5,600 ft (SSTVD) to the southeast; depth range for the Medina Group near the proposed injection wells is -5,560 ft to -6,070 ft (SSTVD) (Figure 42). Gross thickness of the Medina Group in the project area averages between ~160 ft to 190 ft (Figure 42).

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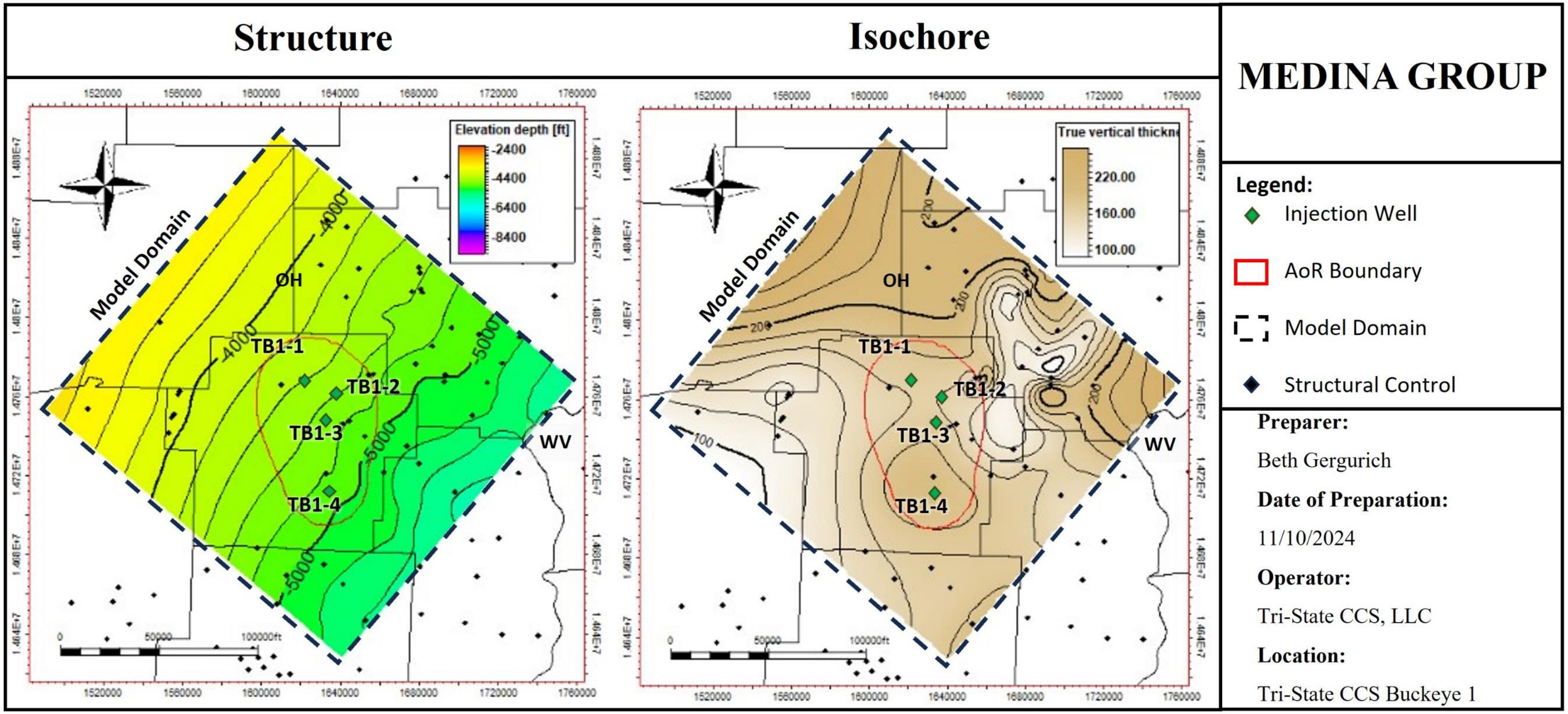

Figure 42: Top Structure (right) and isochore (left) of the Medina Group interval (Structure C.I. = 200'; depths SSTVD; Isochore C.I. = 20') with the four potential injection sites shown in Carroll County, Ohio. The static model domain is shown as a black dashed line.

2.4.2.3. MIC Primary (lower) Confining Zone: Queenston (Juniata) Shale Formation

The Queenston Shale Formation (OH, PA, NY, ON), also referred to as the Juniata Shale Formation (WV, PA, VA, NY), or the Sequatchie Formation (KY, TN), lies beneath the Medina Group and serves as basal confining zone for the MIC (Figure 30). Regionally, it has been interpreted as a fluvial and subaerial delta shedding off the Taconic highlands, coined the "Queenston Delta Complex," into transitional and shallow marine environments (Figure 43; Blue, 2011; Brogly, 1984; Dennison, 1976). Brogly (1984) described it at outcrops in Southern Ontario as a siltstone with between 40 and 70% carbonate, non-aeolian sands, and some gypsum deposited in a supratidal mudflat fed by sediment from a N-S river, while further south, in outcrop in West Virginia, the Juniata is described as a heterolithic red mudstone with coarsening sandstones and conglomerates deposited in the transitional tidal flat to shoreface (Blue, 2011). Figure 43 shows the proposed injection location in Carroll County coinciding with the transitional marine Queenston Shale, rather than the coarser, subaerially deposited Juniata (Blue, 2011).

The Queenston Shale Formation is in excess of 1,500 ft and is found at depths between ~-3,600 ft and -5,800 ft (SSTVD) in the project area (Figure 43). The Queenston along with the Late Ordovician unconventional reservoirs (shales) and seals are ~2,500 ft in thickness above the Wells Creek Formation (Figure 44). In addition, a study investigating the depth of penetration of variable fluids with different viscosities in the Queenston shale of southern Ontario measured the hydraulic conductivity of the Queenston Shale as 1.9×10^{-9}, which would classify it as impermeable (Al-Maamori, et al., 2017). Based on the shale's vast thickness and low permeability, the Queenston Shale will serve as an effective bottom seal for the MIC.

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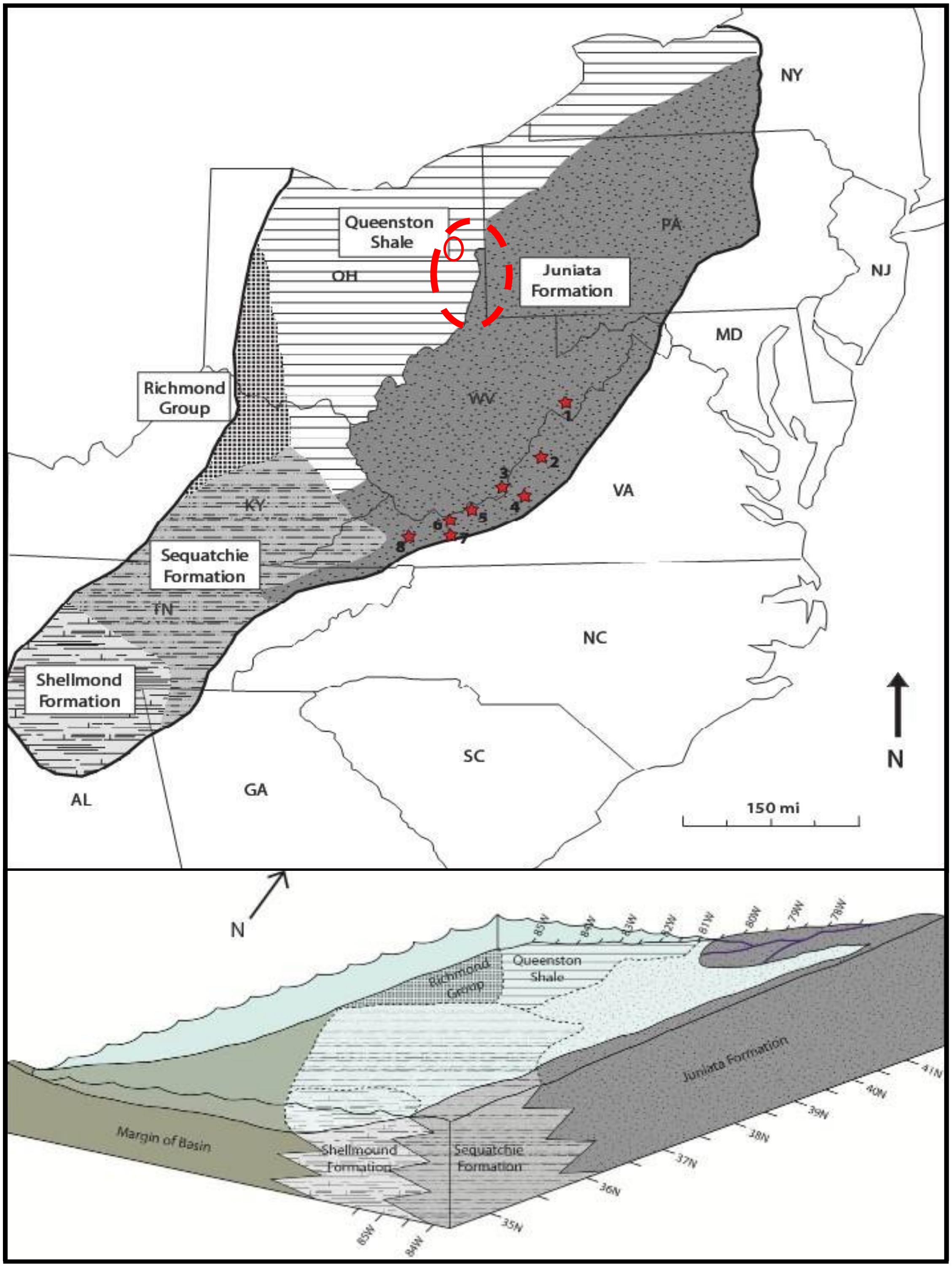

Figure 43: (Upper) Map of late Ordovician formations in the Appalachian Basin and (Lower) depositional systems of the Queenston Shale (modified from Dennison, 1976 and Blue, 2011). The Tri-State CCS Hub location is indicated with a red dashed circle and the approximate AoR with a solid red oval.

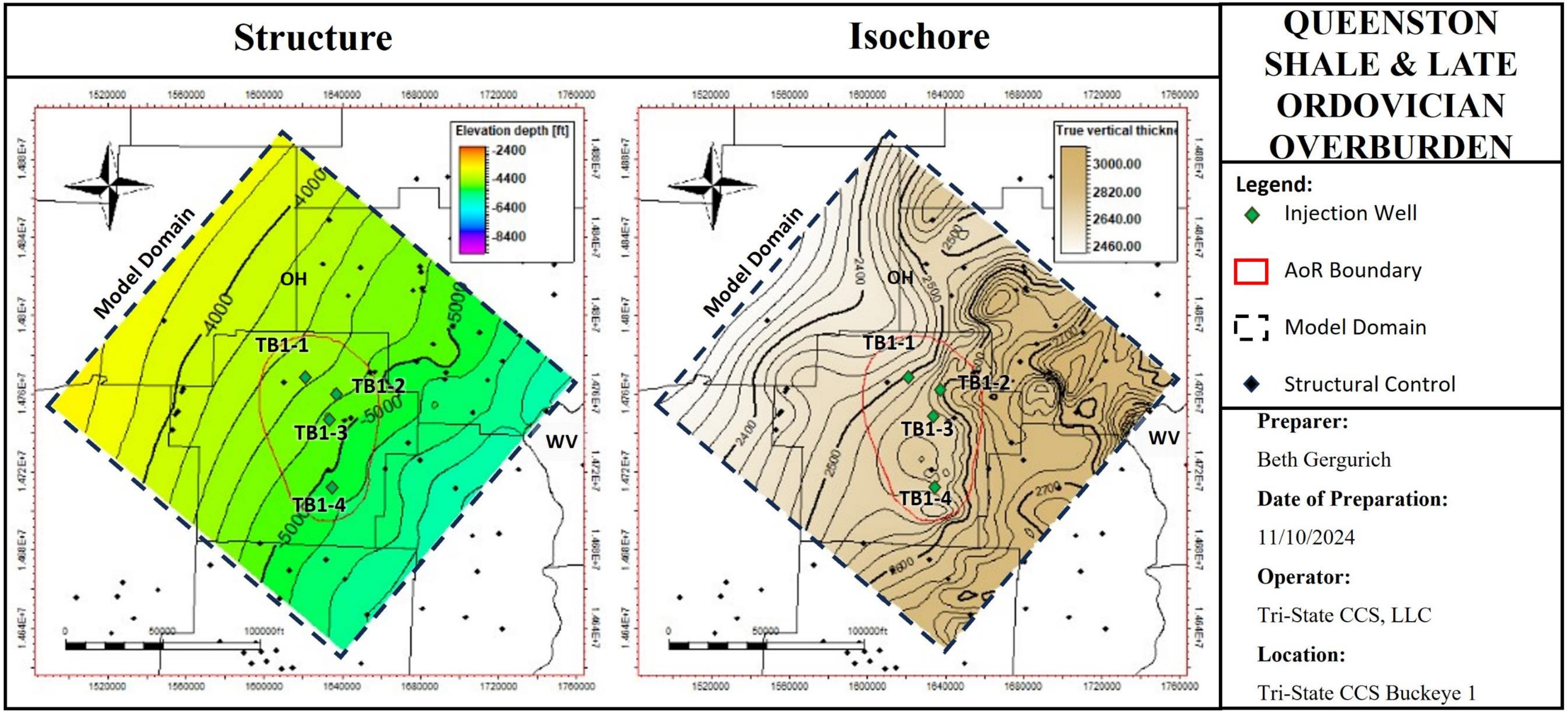

Figure 44: Top Structure (right) of the Queenston Shale interval (C.I. = 200'; depths SSTVD) and the isochore of the Queenston Shale and Late Ordovician intervals (left) (C.I. = 20') with the four potential injection sites shown in Carroll County, Ohio. The static model domain is shown as a black dashed line.

2.4.3. Lower Injection Complex: Knox Injection Complex (KIC)

The KIC is composed of the Cambro-Ordovician Knox Group (and members therein) and is shown in Figure 30. The Knox Group has been the subject of study for CO_2 sequestration (e.g., Wickstrom et al., 2008; Skeen, 2010; Gupta et al., 2020) and will be evaluated in the CarbonSAFE stratigraphic test wells.

The Cambro-Ordovician Knox Group, and age-equivalents in other parts of the U.S., has been the subject of evaluation for CO_2 sequestration, e.g., the Illinois Basin (Kirksey et al., 2014) and the Midcontinent region (Watney and Holubnyak, 2017), the Ohio River Valley (Gupta et al., 2005), and likewise, is present in the project area. The Knox Group in this region is composed of three major formations, from bottom to top, the Copper Ridge Dolomite, the Rose Run Sandstone, and the Beekmantown Dolomite, though alternate nomenclature and sub-units have been identified elsewhere.

2.4.3.1. KIC Primary (upper) Confining Zone: Wells Creek and Late Ordovician Overburden

Regionally, the upper confining member to the Knox Group is composed of the Wells Creek Formation (Figure 30). The Wells Creek Formation is a dolomitic shale with limestone and sandy dolomite beds and serves as an effective seal above the Knox unconformity as evidenced by the presence of oil and gas pools in the area (i.e., Baltic Field; Birmingham-Erie Pool) found within Knox erosional remnants throughout the region (Riley, 1994; Riley et al., 2002; Gupta et al, 2008, Mudd et. al, 2003; Wickstrom et al., 2008). Further, the Wells Creek is overlain with ~2,000 ft of the Upper Ordovician tight limestone in the Black River and Trenton Limestone Groups, the Utica Shale, and the Cincinnati Group (Figure 30).

Based on the static model, the top of the Wells Creek Formation in the project area ranges in depth from –5,800 ft (SSTVD) to the northwest to –8,400 ft (SSTVD) to the southeast; the depth range for the Wells Creek Formation near the proposed injection wells is 8,220 ft to 8,815 ft (TVD) (Figure 45 and Figure 30). The isochore of the Wells Creek Formation in the project area averages between ~80 ft and 110 ft Figure 45). The porosity of the Well Creek Formation is ~3.5%, and permeability is 0.0003 md measured from a rotary sidewall core from the Ohio Division of Geological Survey CO_2 No. 1 well in Tuscarawas County, Ohio (location shown in Figure 19 of subsection 2.1.11), west of the AoR (Wickstrom et al., 2011).

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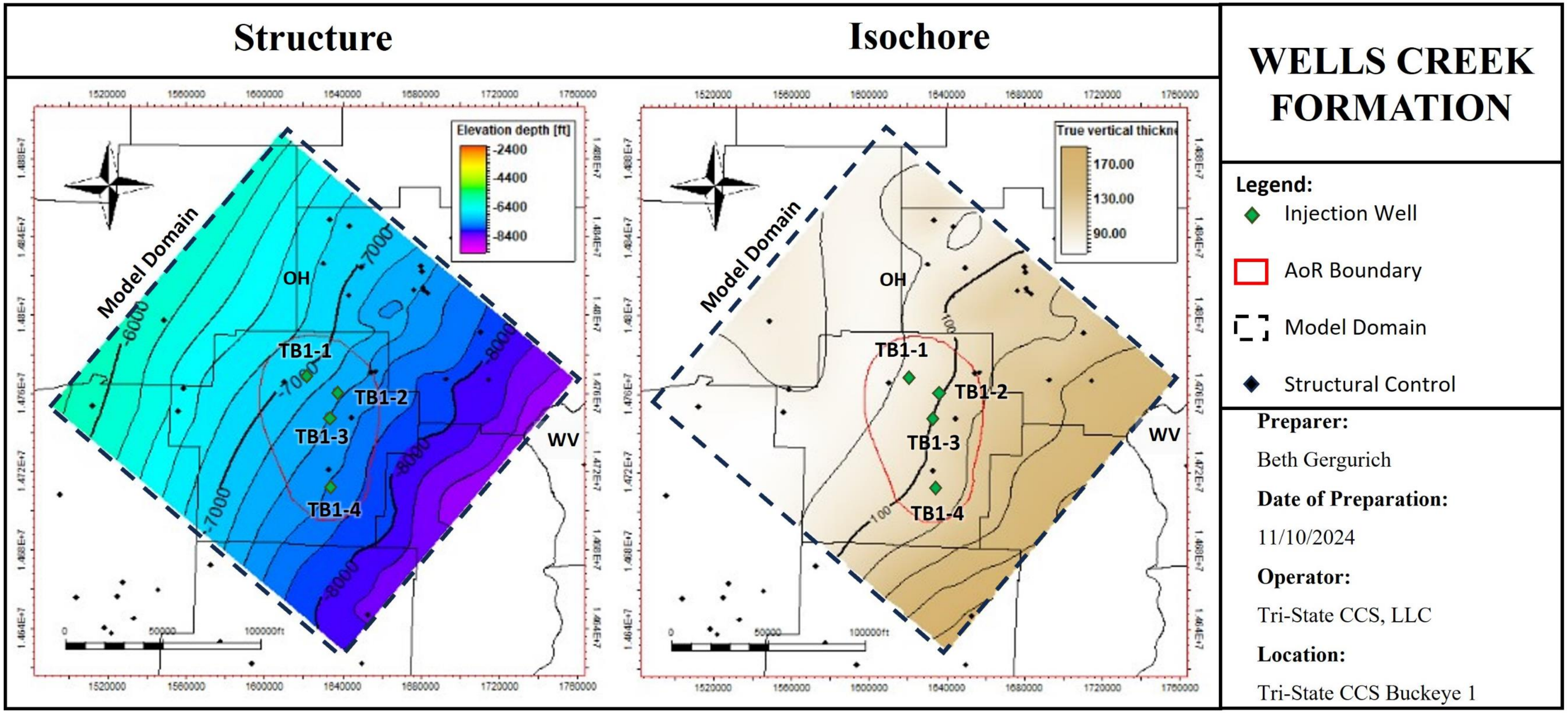

Figure 45: Top Structure (left) and isochore (right) of the Wells Creek Formation interval (C.I. = 200'; depths SSTVD; C.I. = 20') with the four potential injection sites shown in Carroll County, Ohio. The static model domain is shown as a black dashed line.

2.4.3.2. KIC Primary Injection Zone

The Knox Group in the project area consists of an erosional angular unconformity informally known as the Knox and is also called the Owl Creek and several geologic units: the Beekmantown Dolomite, the Rose Run Sandstone, and the Copper Ridge Dolomite. The individual formations in the Knox Group thicken toward the Rome Trough and pinch out at the unconformity toward the Findlay Arch (Figure 9 and Figure 46). In total, it is described as predominantly well-cemented dolomite with little to no permeability; however, discrete zones of porosity and permeability exist and are traceable over distance (Greb et al., 2008). The presence of porous units with intervening non-porous and impermeable zones ('aquitards') offers opportunity for numerous intra-Knox sequestration targets as individual flow units, similar to the Wellington Project area in the Midcontinent (Watney and Holubnyak, 2017) and the Ohio River Valley CO_2 Storage Project (Gupta et al., 2005) but could also inhibit injectivity.

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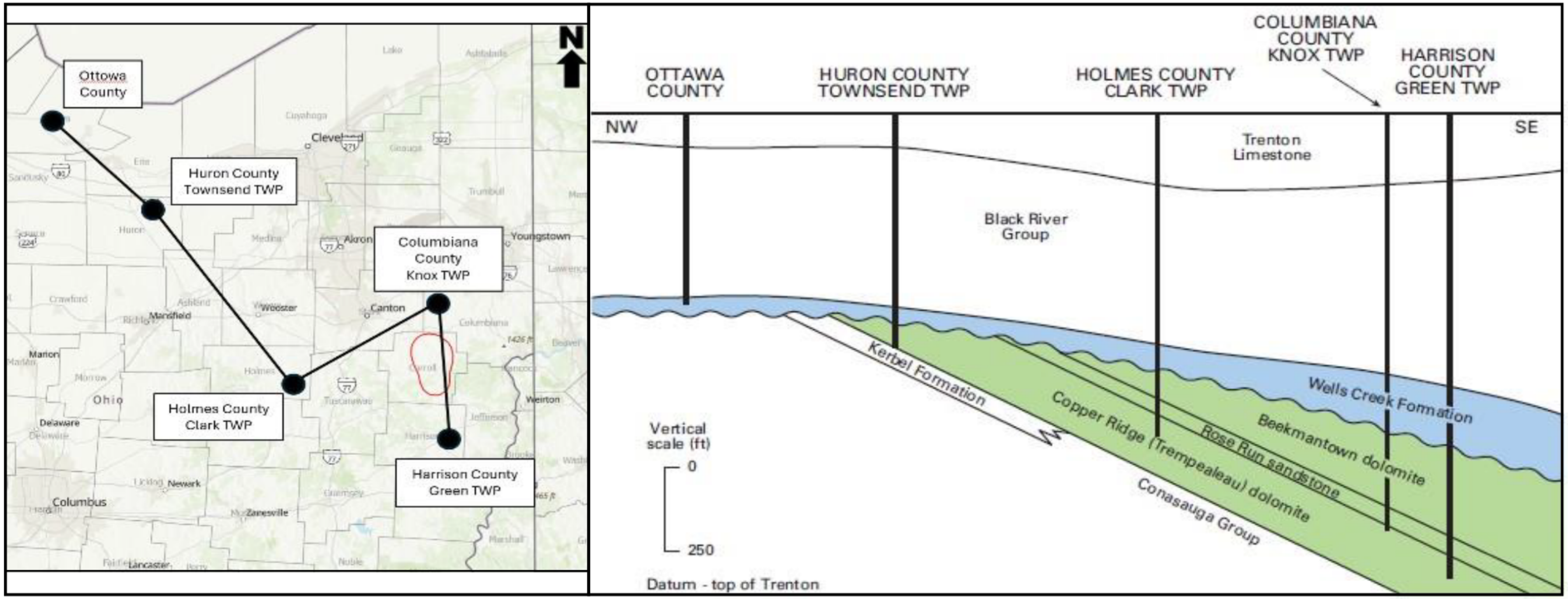

Figure 46: Diagram illustrating the regional thinning, and truncation, of the Knox Group, from the project area to the northwest into north-central Ohio, over the Findlay Arch (Wickstrom et al., 2008).

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The Knox Group was deposited in the Upper Cambrian and Late Ordovician shallow carbonate bank system (Demicco and Mitchell, 1982; Ettensohn, 2008). These shallow carbonate depositional systems hold a variety of different sub-environments resulting in a variety of mostly carbonate facies in the rock record, and regression events are punctuated by the input of siliciclastics: the Rose Run and the "B" zone in the Copper Ridge Dolomite (Wickstrom et al, 2011). This, coupled with the syn-depositional subaerial alteration and the further post-depositional alteration of the units, results in highly variable lithosomes with low predictability, both vertically and laterally (Hull, 2012; Smosna et al, 2005; Wickstrom et al., 2010).

The unit directly below the unconformity in the project area is the Beekmantown Dolomite. In the nearby CO2 No. 1 well in Tuscarawas County, Ohio (see Figure 19 and Table 2 for location in subsection 2.1.12) the Beekmantown is a very fine to medium crystalline, tan-brown dolomite. Original sedimentary structures have been mostly destroyed by the dolomitization that has occurred, though Wickstrom et al (2011) notes that soft sediment deformation, stylolites, and evidence of burrows have been found in cores from Eastern Ohio. Two scales of secondary porosity occur in the Beekmantown Dolomite resulting in the presence of breccia porosity, vugs, fractures, inter- and intra-crystalline, molds and microfractures. Most of the larger pores occurred from subaerial exposure during the Cambro-Ordovician and are found close to the unconformity surface (Smosna et al, 2005; Greb et al., 2008).

XRD analysis of rotary sidewall cores from the Ohio Division of Geological Survey CO2 No. 1 well in Tuscarawas County, Ohio (Table 6; and Table 2 for location in subsection 2.1.12) indicates that the Beekmantown is entirely dolomite with minor calcite and trace amounts of other minerals. The framework grain analysis of the sidewall cores further supports this conclusion, classifying the Beekmantown as a very fine to medium crystalline dolostone (Table 6 and Table 7). The core had an average of 4% porosity and permeabilities ranging from 0.0009 md to 0.9 md.

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Table 6: XRD analysis (weight %) for RSWC collected in the Beekmantown Dolomite at the Ohio Division of Geological Survey CO2 No. 1 well in Tuscarawas County, Ohio (location shown in Figure 19). Modified from Wickstrom et al., 2011.

Measured Depth (ft):	7,226	7,231	7,235
Sample Number:	1-30R	1-31R	1-32R
Chlorite	Trace	Trace	Trace
Kaolinite	Trace	Trace	Trace
Illite	Trace	Trace	Trace
Mixed Illite/Smectite	Trace	Trace	Trace
Total Clay	**Trace**	**Trace**	**Trace**
Calcite	1%	1%	Tr
Dol/Ank	99%	99%	100%
Siderite	Trace	Trace	Trace
Total Carbonates	**100%**	**100%**	**100%**
Quartz	Trace	Trace	Trace
K-spar	Trace	Trace	Trace
Plagioclase	Trace	Trace	Trace
Pyrite	Trace	Trace	Trace
Hematite	0%	0%	0%
Barite	0%	0%	0%
Total Other Minerals	**Tr**	**Tr**	**Tr**

Table 7: Framework Grain Analysis for the Beekmantown Dolomite at the Ohio Division of Geological Survey CO2 No. 1 well in Tuscarawas County, Ohio (location shown in Figure 19Modified from Wickstrom et al., 2011.

Measured Depth (ft):	7,226	7,231	7,235
Sample Number:	1-30R	1-31R	1-32R
Rock Name (Dunham):	Medium Crystalline Dolostone	Fine to Medium Crystalline Dolomite	Very Fine Crystalline Dolostone
Total Allochems:	0%	Trace	Trace
Detrital Grains:	Trace	Trace	4%
Matrix:	0%	Trace	0%
Cement Replacement:	94%	86%	95%
Porosity:	6%	14%	1%
TOTALS:	**100%**	**100%**	**100%**

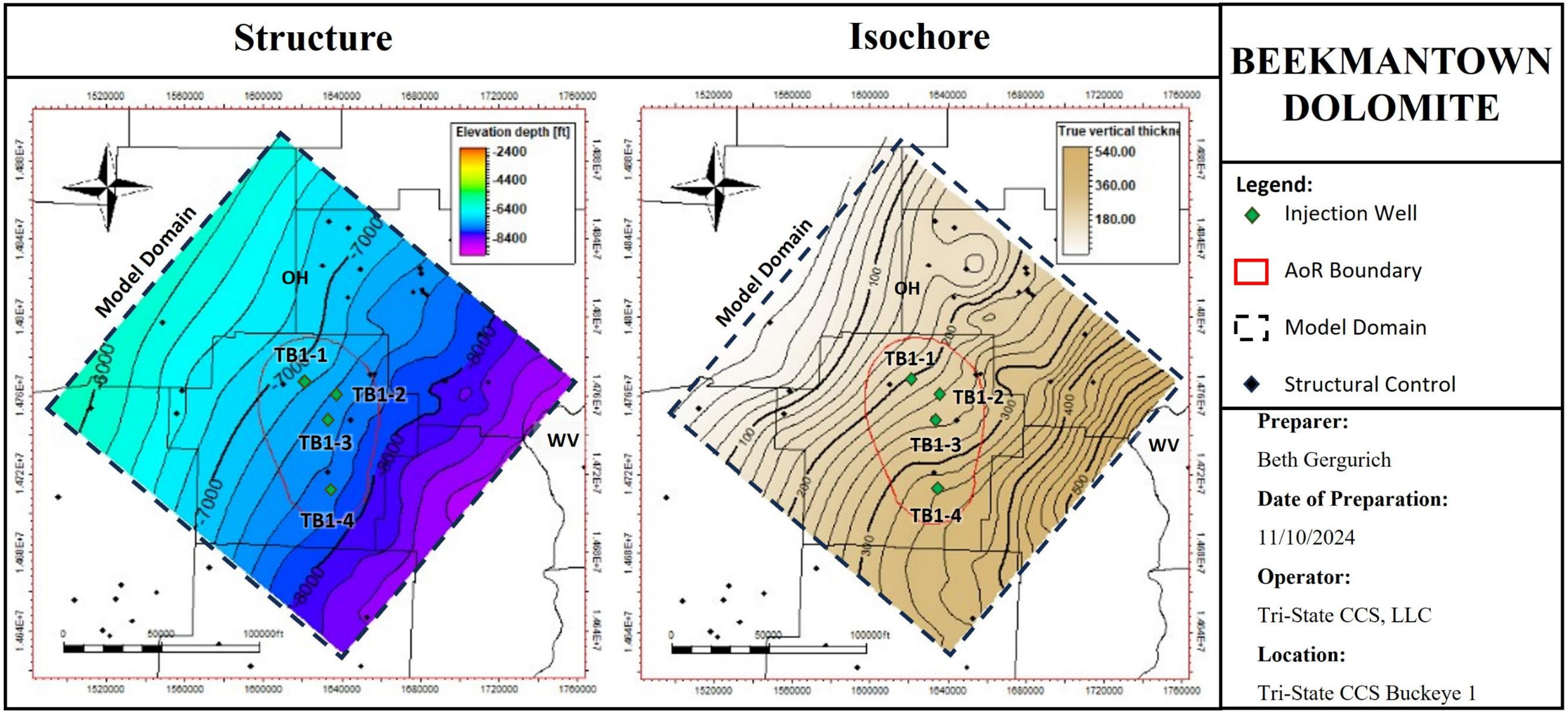

Figure 47: Top Structure (left) and isochore (right) of the Beekmantown Dolomite interval (C.I. = 200'; depths SSTVD; C.I. = 20') with the four potential injection sites shown in Carroll County, Ohio. The static model domain is shown as a black dashed line.

Based on the static model, the top of the Beekmantown Dolomite in the project area ranges in depth from –6,000 ft (SSTVD) in the northwest to –8,600 ft (SSTVD) to the southeast. Gross thickness of the Beekmantown Dolomite in the project area averages between ~45 ft in the northwest to ~ 560 ft to the southeast (Figure 47). This dramatic thinning is due to the Knox (Owl Creek) angular unconformity and the associated pinch-out to the northwest of the project area.

The middle unit in the Knox Group is the Rose Run Sandstone. Framework grain analysis of the Rose Run indicates it is a fine to medium grained quartzose to subarkosic, moderate to well-sorted sandstone with dolomitic cement from samples taken in Northern Kentucky, Western West Virginia, and Eastern Ohio (Table 8; Wickstrom et al., 2011; Bowersox, 2021). Illite, feldspars, and detrital carbonate occur in varying amounts. XRD analysis shows the Rose Run to be composed of a range of 71-89% quartz, 1-30% pore-filling dolomite cement, 2-6% illite/smectite clays and micas, 1-17% authigenic potassium feldspar, and other trace minerals in Northern Kentucky at the KGS 1 Hanson Aggregates well and the Ohio Division of Geological Survey CO2 No. 1 well in Tuscarawas County, Ohio (Table 8; Wickstrom et al., 2011; Bowersox, 2021; location shown in Figure 19 in subsection 2.1.12).

Table 8: XRD analysis (weight %) for RSWC collected in the Rose Run Sandstone at the Ohio Division of Geological Survey CO2 No. 1 well in Tuscarawas County, Ohio (location shown in Figure 19 and Table 2). Modified from Wickstrom et al., 2011.

Measured Depth (ft):	7,377	7,392	7,441	7,506
Sample Number:	1-37R	1-39R	1-43R	1-47R
Chlorite	1%	1%	1%	1%
Kaolinite	1%	1%	1%	1%
Illite	1%	1%	3%	2%
Mx I/S	1%	1%	1%	1%
Total Clay	**4%**	**4%**	**6%**	**5%**
Calcite	0%	0%	Trace	Trace
Dol/Ank	5%	8%	2%	1%
Siderite	Trace	Trace	Trace	Trace
Total Carbonates	**5%**	**8%**	**2%**	**1%**
Quartz	89%	85%	74%	89%
K-spar	1%	1%	17%	4%
Plagioclase	1%	1%	1%	1%
Pyrite	Tr	1%	Trace	Trace
Hematite	0%	0%	0%	0%
Barite	0%	0%	0%	0%
Total Other Minerals	**91%**	**88%**	**92%**	**94%**

Table 9: Framework Grain Analysis for the Rose Run Sandstone at the Ohio Division of Geological Survey CO2 No. 1 well in Tuscarawas County, Ohio (location shown in Figure 19 and Table 2). Modified from Wickstrom et al., 2011.

Measured Depth (ft):	7,377	7,392	7,441	7,506
Sample Number:	1-37R	1-39R	1-43R	1-47R
Grain Size Avg (mm):	0.48	0.35	0.31	0.27
Grain Size Range (mm):	0.09-1.09	<0.01-1.06	0.06-1.23	0.03-0.97
Sorting:	Moderately well	Moderate	Moderate	Moderately poor
Rock Type:	Quartzarenite	Quartzarenite	Subarkose	Subarkose
Quartz:	77%	67%	62%	46%
Feldspar:	1%	2%	17%	9%
Lithic FR:	Trace	1%	1%	Trace
Accessory Grains:	0%	Trace	Trace	Trace
Environmental Indicators:	Trace	1%	Trace	1%
Detrital Matrix:	0%	1%	0%	0%
Cement/Replacement:	13%	17%	10%	33%
Porosity:	9%	11%	10%	11%
TOTALS:	100%	100%	100%	100%

Near the project area, in Tuscarawas County, measurements of the Rose Run Sandstone rotary sidewall cores had average measured porosities of 4.6% with a high of 16.8% and permeabilities averaging 6.5 md with the maximum of 10.8 md. Intrinsic permeability was measured in three intervals in the well with the middle interval having an intrinsic permeability of 22.1 md (Wickstrom et al, 2011). The evaluation of the Rose Run Sandstone for the Ohio River Valley CO_2 Storage Project by Gupta et al. (2005) recorded a similar pattern to what was recorded in Tuscarawas County (Figure 50). Porosity was as high as 12% in the sandstone facies, whereas the intervening dolomitic sandstones were closer to 5%. The measured permeabilities mimicked this pattern alternating between highs of as much as 70 md and lows of 0.001 md.

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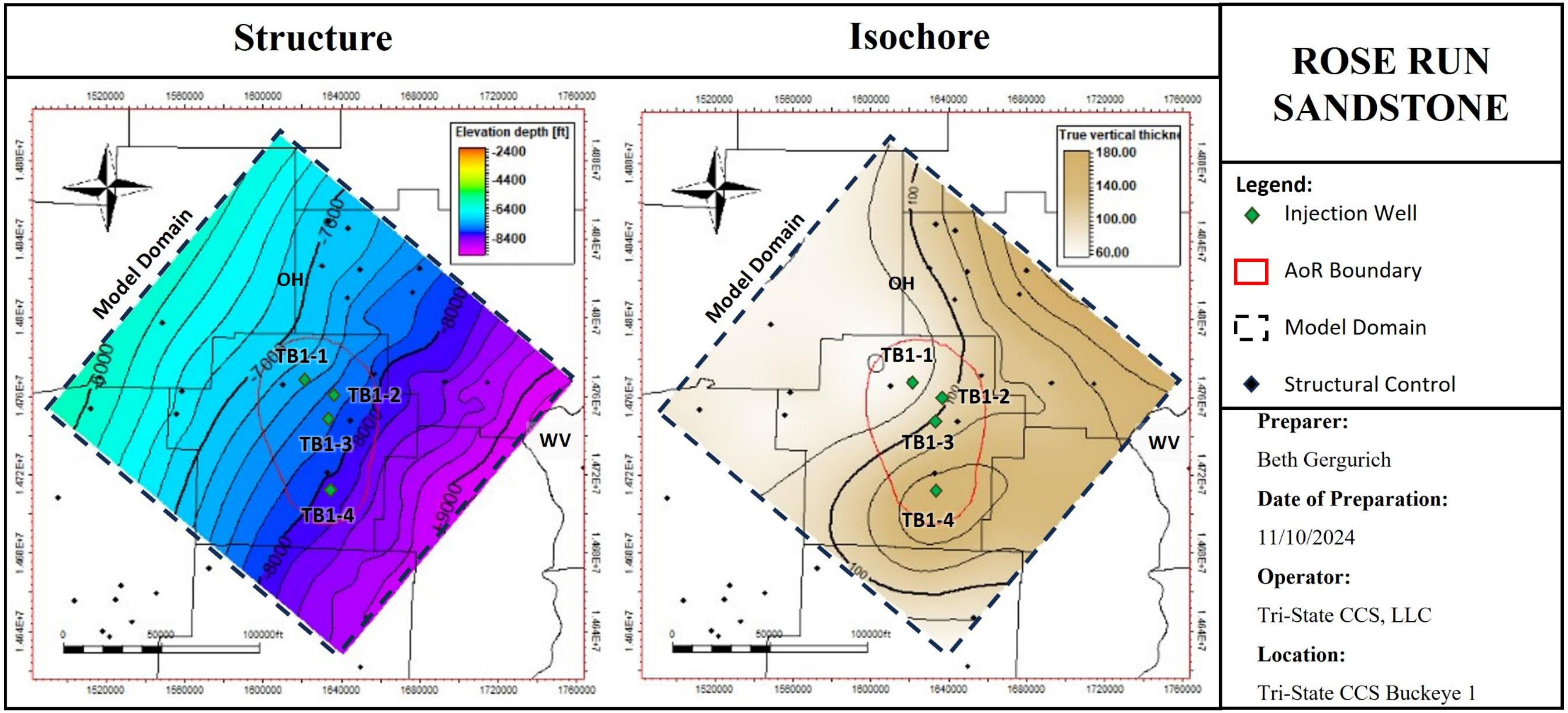

Figure 48: Top Structure (left) and isochore (right) of the Rose Run Sandstone interval (C.I. = 200'; depths SSTVD; C.I. = 20') with the four potential injection sites shown in Carroll County, Ohio. The static model domain is shown as a black dashed line.

The Rose Run Sandstone lies at depths between -5,800 ft and -9,200 ft (SSTVD) in the project area. static model isochore mapping indicates that the Rose Run Sandstone is between ~70 ft and 150 ft thick near the proposed injection wells and thickens to the east-southeast (Figure 30and Figure 48).

The Copper Ridge Dolomite is the basal unit of the Knox Group. It is correlative in the west with the Potosi Dolomite and is overlain conformably with the Rose Run in the project area, though it lies unconformably below the Wells Creek to the west (Wickstrom et al., 2010). It has primarily been described as a light gray to brown dolomicrite with variable bioclasts and sandy intervals, varying with its region in Ohio (Janssens, 1973). The “B Zone” has been described as a glauconitic silty-sandstone 70-100 ft above the base of the Copper Ridge Dolomite (Janssen, 1973). The “B Zone” was identified in the Battelle AEP No.1 Mountaineer well in West Virginia, where it was tested for injection and identified as a significant fluid inflow/outflow zone, and in the Battelle-Ohio Geological Survey (OGS) 1 CO_2 well in Tuscarawas County, Ohio, though low porosity and permeability common to the Copper Ridge Dolomite (<1% phi; <1 md K) indicate that the interval is not conducive to injection (Figure 50; Greb et al., 2012).

Framework grain and petrographic analysis in Tuscarawas County, Ohio indicate it is a medium-grained crystalline skeletal peloidal dolostone, primarily composed of dolomitized carbonate with moderate detrital grain composition (Table 11). This is further supported by the XRD mineralogical analysis (Table 10).

Table 10: XRD analysis (weight %) for RSWC collected in the Copper Ridge Dolomite at the Ohio Division of Geological Survey CO2 No. 1 well in Tuscarawas County, Ohio (location shown in Figure 19 and Table 2). Modified from Wickstrom et al., 2011.

Measured Depth (ft):	7,692
Sample Number:	1-50R
Chlorite	Trace
Kaolinite	Trace
Illite	1%
Mx I/S	Trace
Total Clay	**1%**
Calcite	Trace
Dol/Ank	89%
Siderite	Trace
Total Carbonates	**89%**
Quartz	5%
K-spar	3%
Plagioclase	1%
Pyrite	1%
Hematite	0%
Barite	0%
Total Other Minerals	**10%**

Table 11: Framework Grain Analysis for the Copper Ridge Dolomite at the Ohio Division of Geological Survey CO2 No. 1 well in Tuscarawas County, Ohio (location shown in Figure 19 and Table 2). Modified from Wickstrom et al., 2011.

Measured Depth (ft):	7,692
Sample Number:	1-50R
Grain Size Avg (mm):	0.48
Grain Size Range (mm):	0.09-1.09
Rock Name (Dunham):	Medium Crystalline Skeletal Peloidal Dolostone
Total Allochems:	0%
Detrital Grains:	23%
Matrix:	0%
Cement Replacement:	76%
Porosity:	0%
TOTALS:	**100%**

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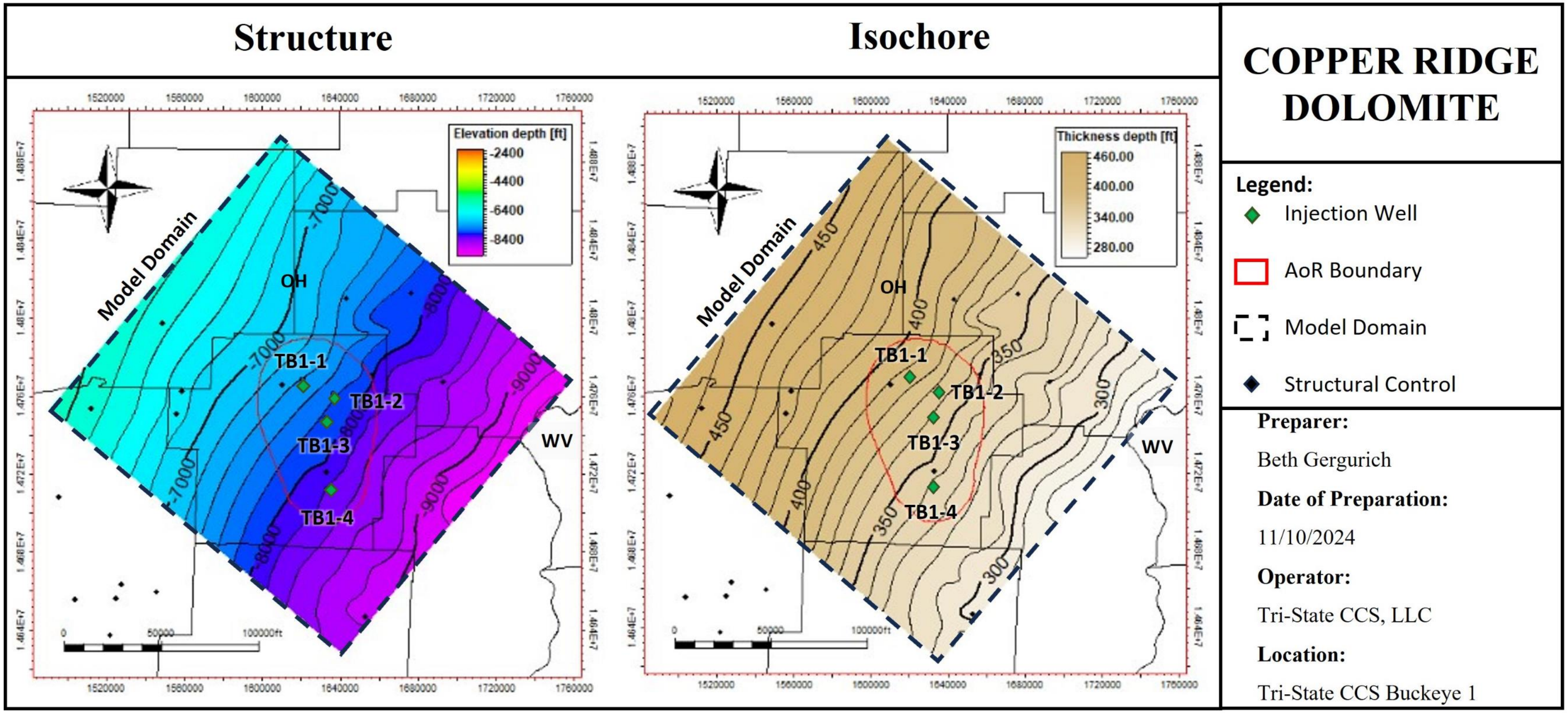

Figure 49: Top Structure (left) and isochore (right) of the Copper Ridge Dolomite interval (C.I. = 200'; depths SSTVD; C.I. = 10') with the four potential injection sites shown in Carroll County, Ohio. The static model domain is shown as a black dashed line.

Gross thickness of the Copper Ridge Dolomite in the project area averages between ~470 ft in the northwest to ~ 280 ft to the southeast (Figure 30 and Figure 49). The depth of the top of the Copper Ridge Dolomite in the project area ranges from –6,000 ft (SSTVD) in the northwest to –9,200 ft (SSTVD) to the southeast.

The thick carbonates in the Knox, as well as the sandstones of the Rose Run, offer tremendous potential for sequestration of miscible CO_2 but will require a full evaluation due to the paucity of data in the region (Perry et al., 2022). Data collection in the AoR and the CarbonSAFE stratigraphic wells and seismic acquisition will enable a full evaluation and vetting of potential disposal in the Knox Group in the area.

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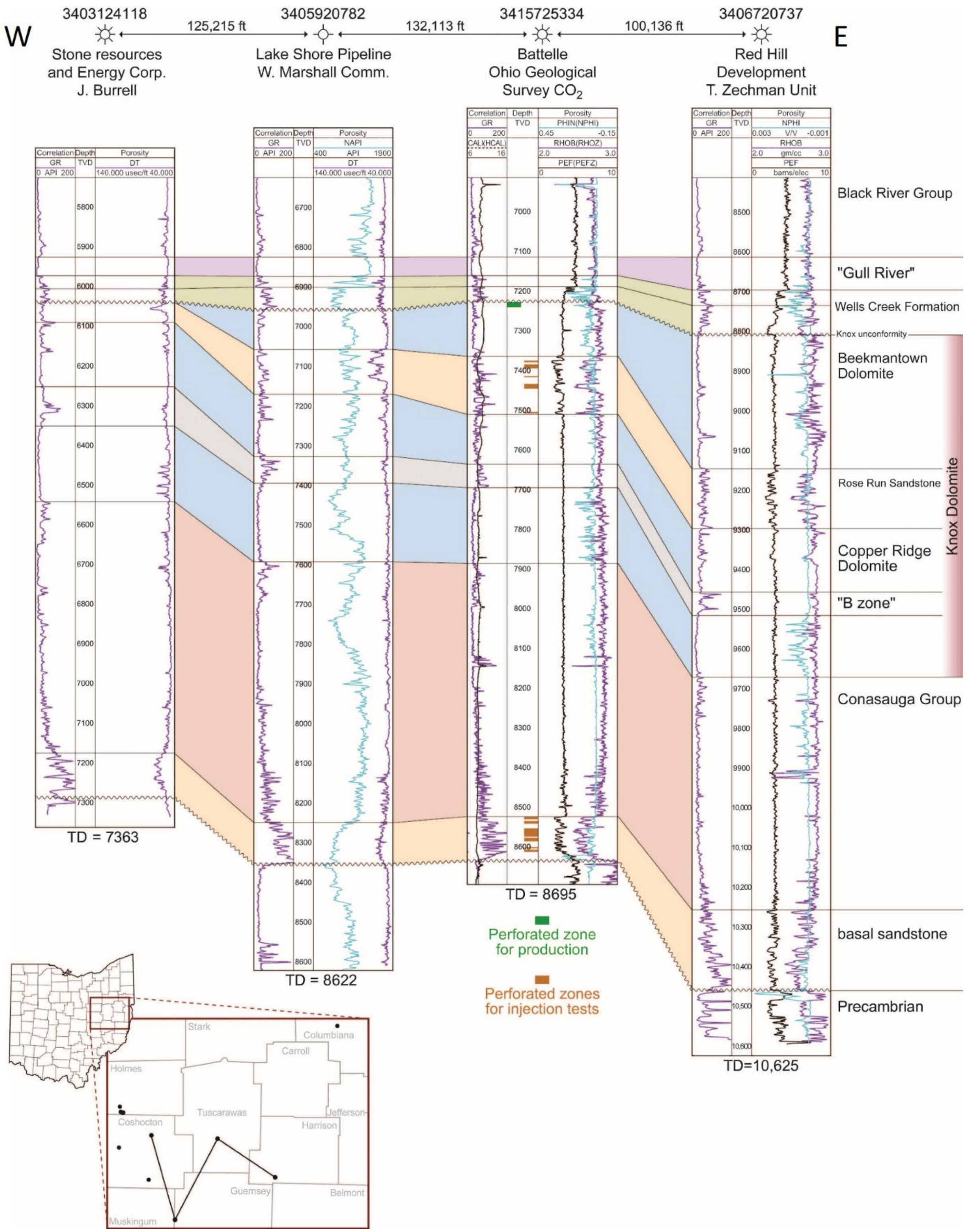

Figure 50: Wireline log cross section of the Knox Group from Coshocton to Harrison County, Ohio. Left track – gamma ray; middle track – depth TVD; right track – porosity, RHOB, and PEF logs. (from Greb et al., 2012).

2.4.3.3. KIC Primary (lower) Confining Zone: Conasauga Group

At its base, the Knox Group in Ohio is confined by the tight carbonates of the Cambrian-aged Conasauga Group. The Conasauga was originally described by Hayes (1891), and the type locality is in Conasauga Valley in northwest Georgia (Wilmarth, 1938). It is pervasive across the region, found in Tennessee, Kentucky, Georgia, Alabama, Ohio, Virginia, and West Virginia and grades into the Eau Claire Formation in Western Ohio and the Gatesburg Formation in Western Pennsylvania Figure 25; Ryder, 2012; Jannsen, 1973; Bandy, 2012; Banjade, 2011; Wagner, 1966). In Tennessee, Rogers (1953) identified the different units that comprise the Conasauga Group (from shallow to deep): the Maynardville Limestone, Nolichucky Shale, Maryville Limestone, Rogersville Shale, Rutledge Limestone, and the Pumpkin Valley Shale. Ryder's (2012) Conasauga Group (Figure 25) includes the Rome Formation and the Conasauga Formation of Janssens (1973).

Janssens (1973) describes the Conasauga Group of Ohio as having variable facies specific to their geographic area (west, central, and eastern). In the project area, Eastern Ohio, the upper Conasauga Group is described as light to dark gray and brown, predominantly microcrystalline to finely crystalline sandy dolomite, interbedded with varying amounts of fine- to coarse-grained sandstone, and the lower is dark brown pelletal and oolitic dolomite inter-bedded with light-colored pelletal dolomite indicative of carbonate shelf and marginal marine deposition. The underlying Rome Formation is predominantly dolomite, though Janssens notes a "narrow north-south strip" of dolomitic sandstone in central Ohio, and the dolomite grades into the Eau Claire Formation in western Ohio.

Mean point counts from three sandstone samples in the Conasauga Group in east-central Ohio plot in the craton interior/recycled quartzose in the QmFLt diagram and in the recycled orogen in the QFL diagram (Figure 51). Banjade (2011) posits from these data that the Conasauga Group siliciclastics were sourced from the transcontinental arch (cratonic interior) and the Grenville Province and could be the source for the recycled orogen petrofacies.

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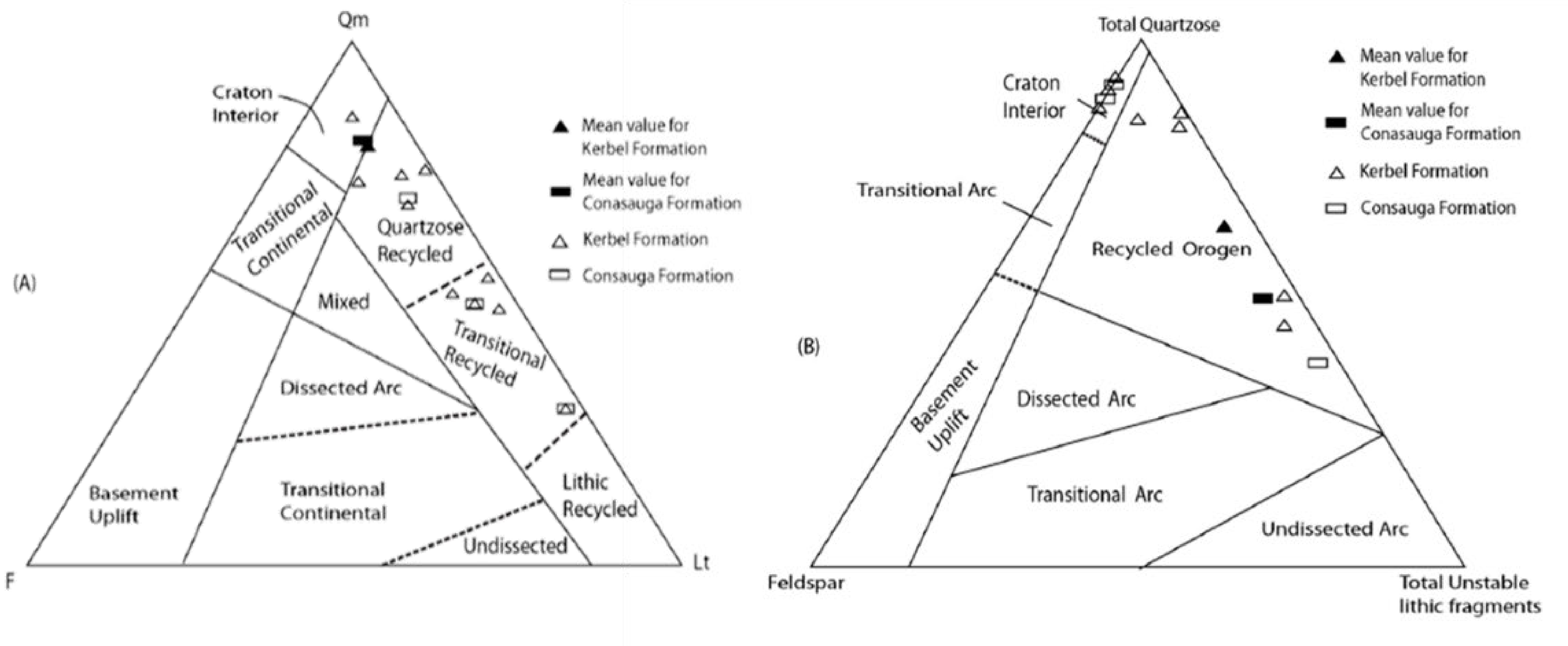

Figure 51: Ternary diagram showing the QmFLt plot and lower diagram showing QtFLt (Dickinson and Suczek, 1979). (A) Mean value for both Kerbel and Conasauga Group plot in the Craton interior petrofacies of the QmFLt diagram. (B) Mean value for both Kerbel and Conasauga Group plot in the Recycled Orogen petrofacies of the QtFLt diagram. Modified from Banjade, 2011.

The thickness of the Conasauga Group ranges regionally from 400 ft to greater than 650 ft and is found at depths between ~-6,400 ft and -9,600 ft (SSTVD) in the project area (Figure 52). Regional evaluation of wells and gas fields for the Ohio River Valley CO_2 Storage Project assigns the average phi to be less than 3% and the permeability at less than 1×10^{-6} md, making it a suitable confining zone.

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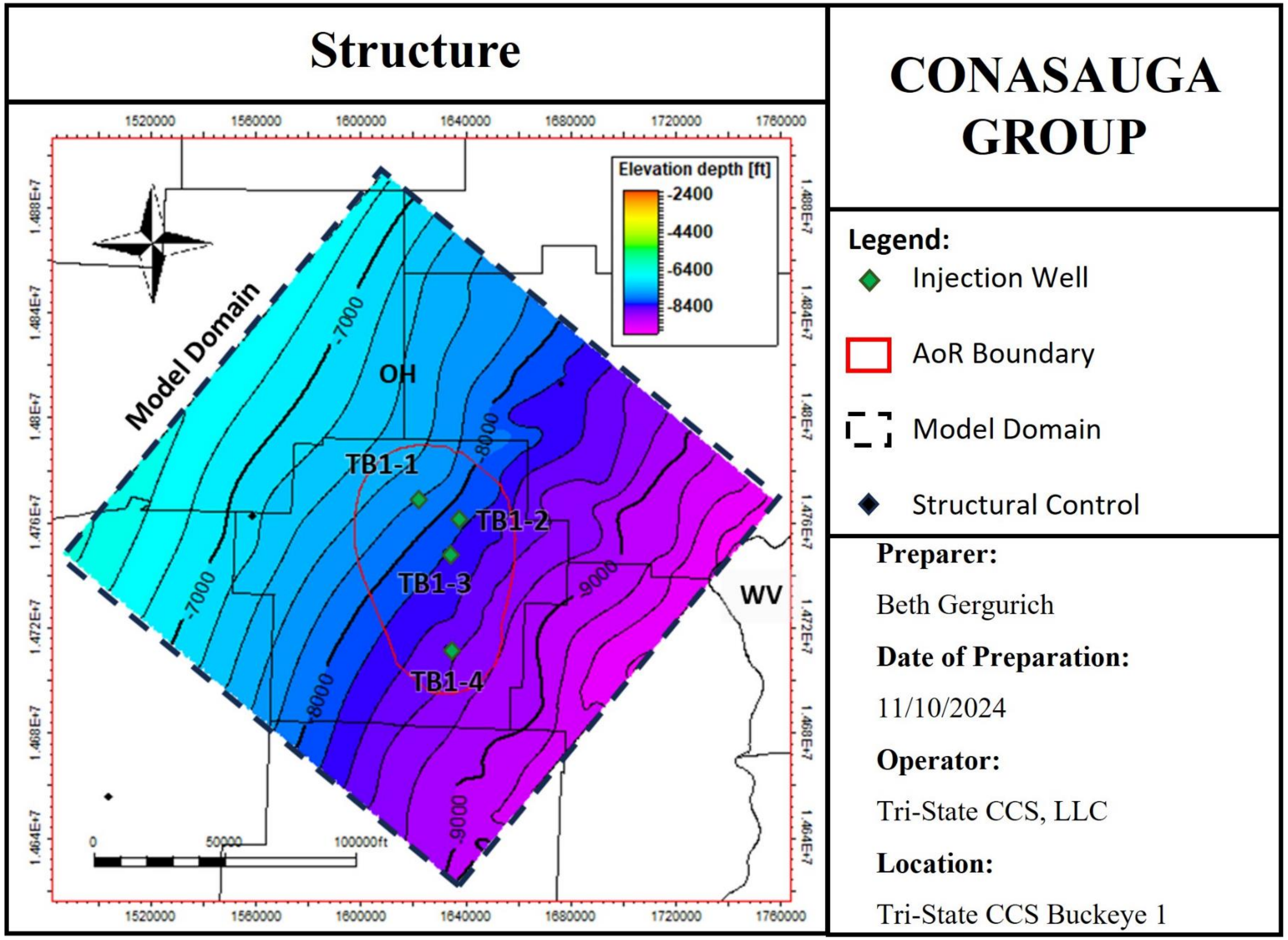

Figure 52: Top Structure of the Conasauga Group interval (C.I. = 200'; depths SSTVD) with the four potential injection sites shown in Carroll County, Ohio. The static model domain is shown as a black dashed line.

2.4.4. Uncertainties & Additional Required Information

Given the sparse subsurface data in the project area, data collection will be imperative to appropriately characterize the injection and confining zones. Subsurface characterization in the project area using wireline logs, whole and rotary sidewall core, and 3D seismic will be performed prior to the start of injection. These data will be collected for the CarbonSAFE stratigraphic wells. Additional whole rock data and logging and testing data will be collected as part of the pre-operational testing for the project (see Pre-Operational Testing Plan). Successful collection of downhole data, core, and the subsequent tests and measurements will provide greater clarity around current uncertainties in lithology and facies, reservoir properties, including capillary pressure and relative permeability, and mineralogy.

2.4.5. Regional Estimated Injection Zone Storage Capacity

Prospective storage resource estimates for the project were calculated for the Carbonate and Sandstone reservoirs using the methodology detailed in Goodman et al. (2011) and Goodman et al. (2016) for saline formations. This methodology generates storage resource estimates using equations (1) and (2) (from Goodman, 2016):

$$G_{\mathrm{CO2}} = A_{\mathrm{t}} h_{\mathrm{g}} \emptyset_{\mathrm{total}} \rho_{\mathrm{CO2}} E_{\mathrm{Saline}} \qquad \text{(Equation 1),}$$

where E_{saline} is the CO_2 storage efficiency factor that reflects a fraction of the total pore volume that is filled by CO_2,

$$E_{\mathrm{Saline}} = E_{\mathrm{A}} E_{\mathrm{h}} E_{\emptyset} E_{\mathrm{V}} E_{\mathrm{D}} \qquad \text{(Equation 2),}$$

where A is area, h is thickness, $\emptyset$ is porosity, V is volumetric displacement, and d is microscopic displacement.

Prospective storage resource estimates were calculated in Excel using average properties across all reservoir formations within the project area. For the Lockport, Beekmantown, and Copper Ridge dolomites, gross formation statistics were used to obtain physical characteristics used for the resource estimate. Sandstone intervals were isolated for the Medina and Rose Run formations, and average physical characteristics were calculated for a resource estimate. Due to limited availability of site-specific data, values from the 2017 version of the DOE-NETL CO_2 SCREEN tool were used to calculate saline storage efficiency factors. All physical inputs, storage efficiencies, and assumptions are shown in Table 12. The resource estimate suggests that all reservoir formations, together, may be able to store between 434.1 (P10) to nearly 2,190 (P90) MMt of CO_2 Table 13 details the results of the prospective storage resource calculations.

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Table 12: Parameters used for Calculating Storage Resource Estimates for Reservoir Formations. Note: CO2 density is based on reservoir conditions using regional gradients. ESaline Storage Efficiency = EvEd (volumetric displacement efficiency) + Ephi (effective porosity) +Eh (net-to-gross thickness). Ean/at (Net-to-total area) is assumed to be 1. Efficiency values obtained from 2017 version of NETL CO2 Screen Tool for respective depositional environment.

Resource Estimate Inputs						
Attribute		**Lockport Dolomite Grp**	**Medina Grp**	**Beekmantown Dolomite**	**Rose Run Sandstone**	**Copper Ridge Dolomite**
Mean Reservoir Thickness (m)		367.61	142	567	27	337
Mean Porosity (%)		3	5	3	3	3
Mean CO_2 Density (lb/ft^3)		44	44.1	44.4	44.4	44.5
Area (mi^2)		820				
Depositional Environment (used to determine efficiency)		Dolomite Unspecified	Clastic Shallow Shelf	Dolomite Unspecified	Clastic Peritidal	Dolomite Unspecified
Saline Storage Efficiency	**P10**	0.02	0.022	0.02	0.018	0.02
	P50	0.049	0.068	0.049	0.057	0.049
	P90	0.0917	0.162	0.0917	0.1423	0.0917

Table 13: Cumulative and probabilistic scenarios for prospective storage resource estimates for all reservoir formations based on the regional values.

Reservoir		**Total CO_2 (MMt)**			**Total CO_2 (MMt/mile^2)**		
		P10	**P50**	**P90**	**P10**	**P50**	**P90**
LIC	Lockport Dolomite	102.1	247.6	461.2	0.02	0.048	0.09
MIC	Medina Sandstone	71.5	221.1	526.4	0.014	0.043	0.103
KIC	Beekmantown Dolomite	159.2	386.1	719	0.031	0.076	0.141
	Rose Run Sandstone	6.8	21.8	53.9	0.001	0.004	0.011
	Copper Ridge Dolomite	94.5	229.2	426.8	0.018	0.045	0.083
Total Summed Storage		**434.1**	**1105.8**	**2187.3**	**0.084**	**0.216**	**0.428**

2.5. Geomechanical and Petrophysical Information [40 CFR 146.82(a)(3)(iv)]

2.5.1. Salina Group Confining Zone Petrophysical Analysis

The Salina Group comprises a group of generally impermeable shales, dolomite, and salts with variable internal stratigraphy. No porosity and permeability data were available from the salt layers; however, permeability of interbedded salts is often taken to be 0 in petrophysical analyses and for this analysis was considered to be approximately 1 nd. One well near the AoR (API No. 34013205860000; see well no. 1 location in Figure 20) provided core data in the Salina Group that could be used in the petrophysical analysis (Figure 53). These data come from the dolomitic layers in the Vernon (Units A and B), Syracuse (Unit F), Camillus (Unit G) and Bass Islands/Bertie. There are no data points from the actual salt layers. The permeability ranges from 0 to 2.45 md, averaging 0.3 md. These measurements are corroborated by the measurements from publicly available core analyses (Table 14). Porosity and permeability data from the Stark County well did not have corresponding logs and therefore could not be used in the petrophysical analysis. Site-specific data collection from the CarbonSAFE stratigraphic test wells and during the pre-operational testing program will provide additional detail on the specific internal variability of the Salina Group.

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2.5.2. Lockport Dolomite Group Injection Complex Petrophysical Analysis

Minimal core data were available for constructing a petrophysical model of the Lockport Dolomite Group. Four samples from two wells were available, of which the two from API No. 34013205860000 (Figure 20; see well no. 1 location in Figure 20) were used in the analysis. Given the paucity of data, geophysical well logs, including the gamma ray, bulk density, and neutron porosity logs, were used to build a petrophysical model and yield porosity estimates. Carter et al., 2010 provided nine porosity and permeability data points from the Lockport Dolomite Group from two wells, the Johnson #1 in Pennsylvania, and the Ocel #1 in Ohio (see well nos. 10 and 11 locations in Figure 20 and Table 2). This data set was used to model permeability as a function of porosity in the Lockport Dolomite Group.

The data set in this petrophysical analysis included a total of 13 sample points (four from the database and 9 from publications) through the Lockport Dolomite Group. To match the petrophysical model to core, one well (API No. 34013205860000) with geophysical well logs and core data was used, with two samples within the Lockport Dolomite Group.

Given our current best estimate approach, we utilized a basic three-mineral system to estimate the mineralogy of the Lockport Dolomite Group. The gamma ray curve provided insights into clay content, and in the absence of photoelectric factor logs, we employed a neutron-density cross plot to determine the relative abundance of calcite and dolomite. The model’s results were considered reasonable and will be compared to results from pre-operational testing of the injection wells which will include mineralogic, porosity, permeability, and facies data. The carbonate lithology is variable throughout the Lockport Dolomite Group, as shown in Figure 54, and it is expected that the pre-operational testing program will add significantly to the understanding of the mineralogical system and its calibration to core, and the petrophysical model will be updated if significant changes are found from the current petrophysical model.

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2.5.3. Rochester Shale Formation Confining Zone Petrophysical Analysis

The Rochester Shale Formation comprises two members, the lower Lewiston Member and the upper Burleigh Hill Member. Both members are predominantly mudstone with some more carbonate-rich sections (Figure 55). The mudstone packages of the lower and upper section are 46 ft and 194 ft thick, respectively, with local variation possible within a few feet. Porosity and permeability have been assigned to the Rochester Shale Formation based on log evaluation. Two different log evaluation approaches have been used to assess the porosity and permeability, focused on the mudstone sections. The porosity of both members is found to be approximately 1%, and using Yang and Aplin (2010), this yields a corresponding permeability of < 0.001 md, or < 2 md using Byrnes (2005).

The more carbonate-rich sections of the Rochester Shale Formation have marginally higher porosity and permeability than is seen in the mudstone sections, up to 0.3 md and 500 md using Yang and Aplin (2010) and Byrnes (2005), respectively. However, this permeability is still quite low and is not expected to be vertically or horizontally connected.

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2.5.4. Medina Group Injection Complex Petrophysical Analysis

Nine wells with core data, including some combination of bulk density, grain density, porosity, water saturation, and permeability, were used to build the petrophysical models. The locations of these wells range from approximately 11 to 42 miles from the project area. Of the nine, only two wells, API Nos. 34019202560000 and 34013205860000 (12 and 44 miles from the project area, respectively), had geophysical well logs to test the fit of the model against core data. Based on geophysical well log response, the core data covered a gradient from low porosity silty mudstone/mudstone to higher porosity clean sandstone. The core data set did not include any mineralogy data.

Thirty-one wells (including the two wells with core data) had sufficient well log data over the Medina Group to produce and run a petrophysical model and estimate porosity and permeability. Data from the gamma ray and bulk density logs were used to calculate these parameters. Permeability calculations in the Medina Group were made using equations defined by Byrnes (2005) using data generated by Castle and Byrnes (1998, 2005) on the Medina Group in northwestern Pennsylvania.

The data set included a total of 428 sample points through the Medina Group section. To match the petrophysical model to core, two wells with geophysical well logs and core data were used, API No. 34019202560000 with 93 samples and API No. 34013205860000 with 7 samples across the Medina Group (Figure 56 see well nos. 2 and 1 locations, respectively, in Figure 21 and Table 2).

A basic two-mineral system was used to estimate the mineralogy of the Medina Group section. The gamma ray curve was used to estimate clay content and the balance was assigned to quartz. Such a model was able to adequately match porosity (and grain density) data where available, suggesting the assumptions of basic mineralogy are representative of the formation. Using this two-mineral system, the top of the section is notably less permeable and is estimated to have a higher clay content than the lower Medina Group, which is consistent with the core measurements from the two different parts of the section.

Mineralogic data will be collected from the CarbonSAFE stratigraphic test wells and during the pre-operational testing program at the injection locations to verify the model. The additional mineralogical detail collected during pre-operational testing will provide information about the variation in clay types and give insight into the likely impact on matrix behavior in the injection zone.

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2.5.5. Queenston Shale Confining Zone Petrophysical Analysis

The Queenston Shale is a regionally extensive shale, which is also referred to as the Juniata Shale Formation (WV, PA, VA, NY) or the Sequatchie Formation (KY, TN). In the project area, the deposition coincides with transitional marine shales of the Queenston Shale and the subaerial facies of the Juniata Shale (heterolithic red mudstone with coarsening sandstones and conglomerates deposited in the transitional tidal flat to shoreface). The Queenston Shale is more than 1,500 ft thick in the project area, with generally low porosity and permeability associated with the shale members of the unit.

Few local core-based measurements of the Queenston Shale are available, with only one well (API No. 34013205860000; see well no. 1 location in Figure 21 and Table 2) having porosity and permeability reported (3% and 0 md, respectively). Nevertheless, the extensive thickness of the shale is expected to form a robust confining unit. Site-specific data collection from the CarbonSAFE stratigraphic test wells and during the pre-operational testing program will provide additional detail on the specific internal variability of the Queenston Shale and provide detailed petrophysical information on the different members.

Table 14: Core-based porosity and permeability measurements for confining and injection units. Locations and API nos. in Figure 19, Figure 20, Figure 21, and Table 2.

Formation	Porosity (decimal)	no. pts.	Permeability (md)	no. pts.	Wells
Salina Group	0.060	11	0.12	10	1
Lockport Dolomite Group	0.045	4	1.42	3	2
Rochester Shale Formation	0.060	1	0.00	1	1
Medina Group	0.048	412	9.99	272	15
Queenston Shale	0.030	1	0.00	1	1
Knox Group	0.054	380	39.92	273	7

2.5.6. Knox Injection Complex Petrophysical Analysis

The publication, Riley et al. (1993), was the primary repository for core data used in this model. The data set includes porosity, permeability, and grain density data from cores taken from four wells in Coshocton County, OH: API numbers 34031240920000, 34031226530000, 34031259620000, and 34031222680000, one well from Jackson County, OH: 34079201020000, and one test/monitoring well in Scioto County, OH that was never assigned an API number. Additional porosity to permeability relationships were modeled using data collected from full wellbore-diameter and rotary sidewall cores taken from a well in Carter County, KY: 16043001050000, and published in Bowersox et al. (2021).

The data set used to build petrophysical models of the Rose Run includes 380 porosity measurements, 273 permeability measurements, and 143 grain density measurements.

Lacking mineralogic and well log data from core wells, an average grain density was calculated from core data. Porosity was calculated using a standard equation of:

(Grain Density – Bulk Density)/(Grain Density – Fluid Density) (Equation 3),

where bulk density came from the logs of interest, and a fluid density of 1.00 gm/cc was used.

Permeability was calculated using the relationship between porosity and permeability from both the Riley and Bowersox data sets. Since the two models yield slightly different results, the average of the two outputs was used in the petrophysical model.

This methodology was applied to geophysical well logs in the area of interest, which includes Coshocton County (the location of much of the Riley data set). Modeled outputs of porosity and permeability match reasonably well with the core data sets indicating that the model is sufficiently predicting the porosity and permeability of the Rose Run Sandstone (Figure 57). The average and maximum porosity from core data is 4.2 % and 14.9 % respectively, and their average and maximum porosity from the wells of interest is 5.6 % and 14.3 % respectively. The average permeability from core data is 10.5 md while the average permeability calculated from well logs is 32 md.

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2.5.7. Geomechanics

2.5.7.1. Proposed Geomechanical Studies

A series of geomechanical studies under the CarbonSAFE initiative will be conducted to address key questions regarding the geomechanical properties of the confining zone intervals. Cores collected from the stratigraphic test wells proposed for this program will provide measurements of rock strength and ductility for the confining zone intervals. The following geotechnical tests will be conducted on each confining zone interval:

- Triaxial compression – ductility;
- Triaxial compression – failure;
- Mohr-Coulomb criterion - failure envelope analysis; and
- Brazilian test - tensile analysis.

The stratigraphic test wells and core samples will also allow for detailed fracture analysis. Pore pressure of the confining zones and in situ local stress measurements will also be made available with the stratigraphic test wells.

2.5.7.2. Regional Stress State

Orientation of the maximum horizontal stress state in the region is available from a variety of data sets and compiled in the world stress map and regional studies of the Appalachian basin (Morris et al., 2017; Heidbach et al., 2018; Brudzinski and Kozlowska, 2019). The orientation of the maximum horizontal stress in central Ohio is generally ENE-WSW and exhibits a mix of tensors from focal mechanism solutions that place it in the strike-slip or thrust faulting regime (Morris et al., 2017). According to Morris et al. (2017), the combination of coexisting thrust-faulting and strike-slip faulting regimes indicates that the intermediate principal stress component (σ_2) is closer in magnitude to the minimum principal stress component (σ_3) than it is to the maximum principal stress component (σ_1), and that the stress difference ratio (φ) is less than 0.5, where:

$$\varphi=(\sigma_2 - \sigma_3)/(\sigma_1 - \sigma_3) \qquad \text{(Equation 4).}$$

2.6. Seismic History [40 CFR 146.82(a)(3)(v)]

The USGS ANSS (Advanced National Seismic System) Comprehensive Earthquake Catalog network was used to provide the historical seismicity record for the AoR locally and regionally (USGS, 2023). Regional historical seismicity was considered for a 50-mi radius around the approximate center of the AoR for a 40-year time period (extending from March 1983 to March 2024) with a magnitude greater than M2.5 (Figure 58) (USGS, 2023).

The project is located within an area of relatively low seismicity. In the AoR, there is no known source of natural seismicity that would compromise the containment of CO_2. The surrounding region of the northern tip of West Virginia, southeastern Ohio, and southwestern Pennsylvania has a very low risk of damaging seismic activity, while western Ohio lies on the edge of the New

Madrid Seismic Zone and the Anna Seismic Zone, and northeastern Ohio contains the Northeast Ohio Seismic Zone, both of which have increased activity (Dart and Hansen, 2008). However, very few of the earthquakes that have historically occurred are known to be associated with faults (Dart and Hansen, 2008). Pennsylvania has a very low risk of seismic activity, and southern West Virginia touches the outer edge of the Giles County Seismic Zone, though it is unlikely that it will have an effect on the project area (Figure 58 and Figure 59).

The USGS-published National Seismic Hazard Map shows the frequency of damaging earthquake shaking expected in a 10,000-year period (Figure 58). Based on this information, the AoR is considered to have the lowest risk of damaging earthquakes on the scale, with fewer than two expected within a 10,000-year period. The surrounding region also has a comparatively low risk of two to four damaging earthquakes expected within a 10,000-year period. According to the USGS, damaging earthquakes are identified as those that have a Modified Mercalli Intensity (MMI) of level VI (6) or higher. They are characterized by "strong" shaking and "*felt by nearly everyone, many awakened. Some heavy furniture moved; few instances of fallen plaster. Damage slight"* (USGS, 2023).

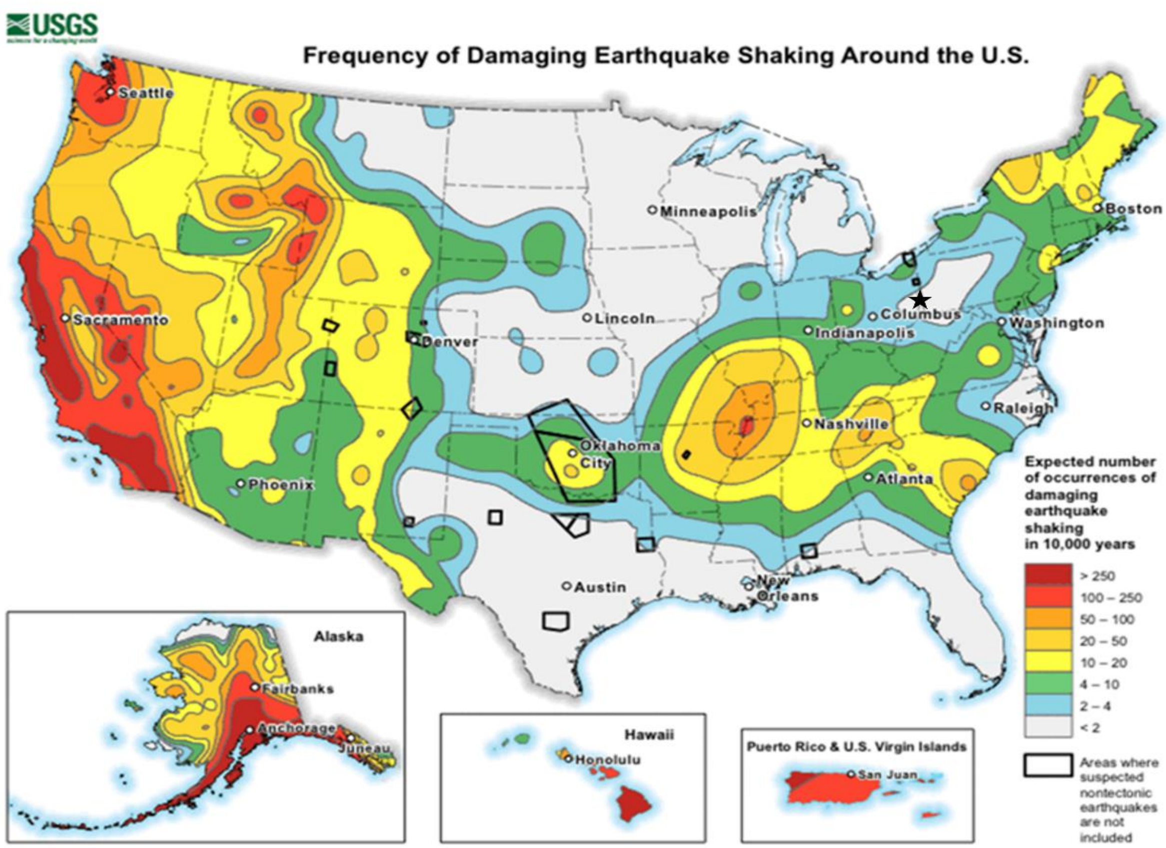

Figure 58: USGS Seismic Hazard Map, showing the frequency of damaging earthquake shaking within a 10,000-year period (Petersen et al., 2008). The project area is indicated by the star on the map in the tri-state region of West Virginia, Ohio, and Pennsylvania.

The Appalachian Basin of Eastern Ohio, where the project is located, is a region of low natural seismicity, with any earthquakes that do occur being of low magnitude. Peak ground acceleration (as a percentage of the gravity constant 9.8 m/s^2) with a 2% likelihood of being exceeded within a 50-year period is illustrated for the region in Figure 59.The peak ground acceleration for the project area is estimated to be 4 to 6 percent of gravity, which would correlate to a Modified Mercalli Intensity of IV-V (light to moderate shaking with limited damage to unstable or delicate objects).

Historically, the Northeast Ohio seismic zone, north of the AoR, has recorded few moderate earthquakes per decade, but felt earthquakes have been reported more frequently in recent decades, likely due to induced activity. The largest earthquake in this zone, with a magnitude of 5.0 on the Richter Scale (M5.0), occurred in 1986. This seismic event created Modified Mercalli intensities of VI in the region. Another damaging earthquake with M5.2 occurred in 1998 in northwestern Pennsylvania, just east of the border with Ohio (Dart and Hansen, 2008). Within 50 miles of the injection locations, there have been six earthquakes in the last 40 years (Figure 60). The location, magnitude, and distance from the AoR for each of these earthquakes is listed in Table 15.

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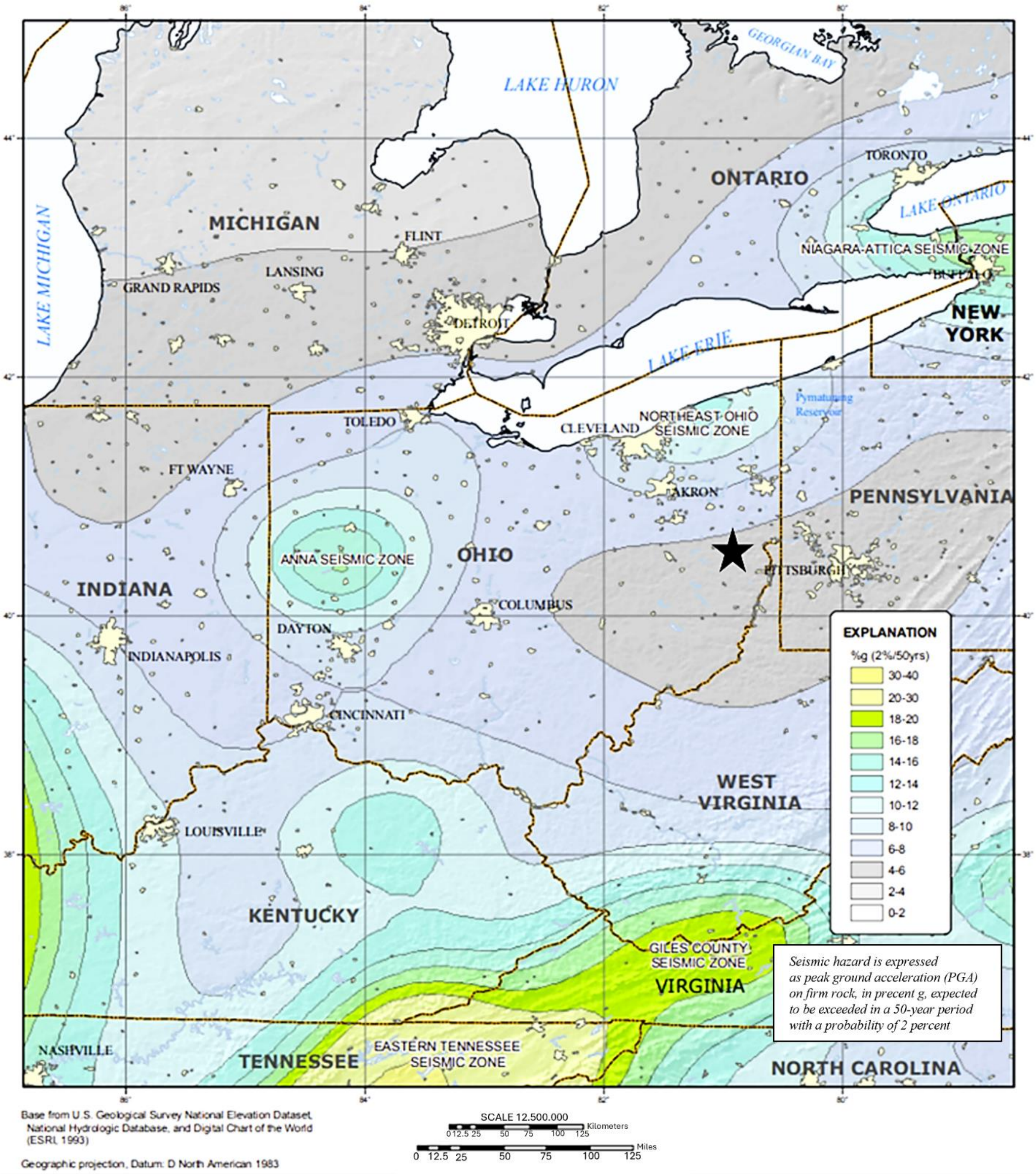

Figure 59: A Seismic Hazard Map of Ohio and nearby states from the USGS National Seismic Hazard Maps, showing the peak ground acceleration that has a 2% chance of being exceeded in 50 years. The project location is marked with a star on the map.

The Emergency and Remedial Response Plan (ERRP) includes information on conducting a formal risk assessment of potential risk scenarios, including microseismic events that could potentially be associated with industrial activities.

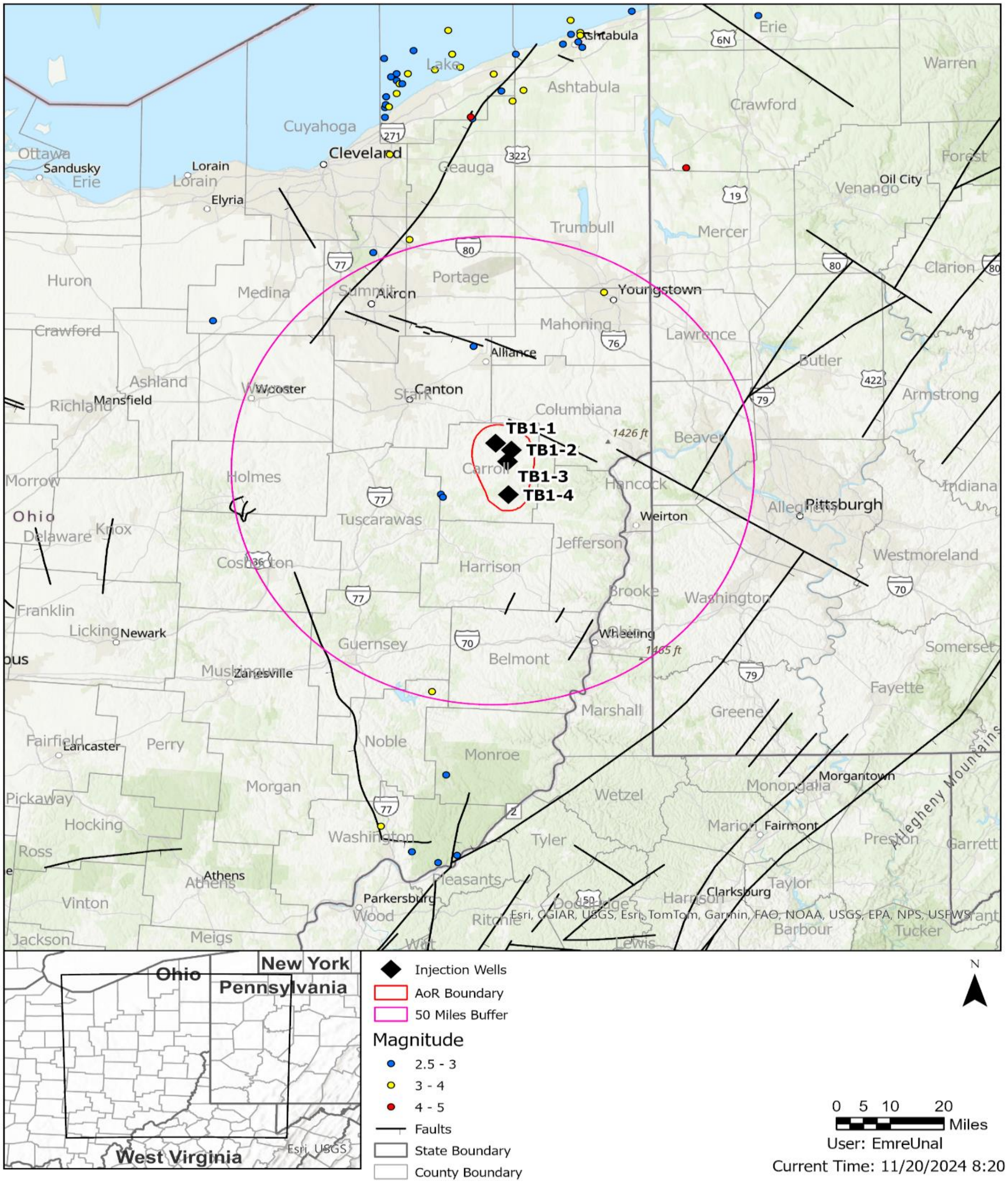

Figure 60: Local seismic events within 50 miles radius of the AoR.

Table 15: Seismic events within 50 miles of the AoR over the last 40 years with a magnitude greater than M2.5 (USGS, 2024).

Date	Latitude	Longitude	Depth (ft)	Magnitude	Distance to AoR (mi)
11/19/2021	40.5121	-81.2650	16,404	2.6	14.37
10/28/2021	40.5029	-81.2577	16,404	2.6	14.19
12/31/2011	41.1215	-80.6843	16,404	4	38.0
8/7/2000	40.9580	-81.1510	16,404	2.9	21.6
5/17/2010	41.24	-81.51	5,000	2.7	47.32
3/12/2007	41.28	-81.38	5,000	3.7	47.303

Since the early 2010s, the Eastern Ohio area of the Appalachian Basin has experienced a significant increase in induced seismic activity, which has been linked with the operations associated with the intensification of unconventional gas extraction conducted in the basin (Skoumal, 2018; Brudzinski and Kozłowska, 2019), more specifically, hydraulic fracturing and the disposal of the wastewater associated with production from the Utica Shale (Skoumal, 2018). Several known occurrences of induced seismicity have occurred in and around Youngstown, OH, approximately 42 miles northeast of the AoR. This seismicity is concentrated in a corridor from eastern Ohio and into central West Virginia, which may be due to geologic variations in the subsurface or extraction operations.

Several regional studies have documented the importance of the proximity to Precambrian basement when considering the possibility of induced microseismicity as related to wastewater disposal wells and hydraulic fracturing. In general, the low permeability of the Precambrian basement rock as compared to the relatively higher permeability of fractured basement rocks and pre-existing faults is interpreted to be a key factor in the potential for fault reactivation (Morris et al., 2017). Additionally, the proximity to critically stressed and optimally oriented faults that are pre-existing in basement lithologies is thought to impact the likelihood of induced recordable seismicity (Skoumal et al., 2018). Considering these factors, Skoumal et al. (2018) suggests that injection within 3,280 ft, or 1,000 m, of basement has the greatest risk of inducing seismicity. The Medina Group injection complex, the shallow target in the project, is greater than 4,000 ft above the Precambrian basement rocks and, therefore, is not interpreted to be a risk for induced microseismicity. The Knox Group, however, is within that distance of the basement and near a basement rooted fault, though its extent is currently unknown. For this reason, further 3D seismic interpretation and regional and local geomechanical analyses will be performed for the CarbonSAFE site characterization to assess that risk. Construction of 3D kinematic and stress models will allow for the evaluation of the present-day and paleo stress states and their effect on fault and fracture stability and slip potential. Additionally, microseismic monitoring will be utilized, where appropriate, to assess and mitigate the induced seismicity risk through the duration of injection as noted in subsection 2.3 of the Testing and Monitoring Plan.

To date, there have been no known induced seismic events in northern Carroll Co., OH, and the historical seismicity record suggests that the proposed storage location is not in a seismically hazardous location. Thus, loss of containment due to seismicity is considered a low risk.

2.7. Hydrologic and Hydrogeologic Information [40 CFR 146.82(a)(3)(vi), 146.82(a)(5)]

The AoR is located within the Appalachian Plateau physiographic province, in the eastern part of the Tuscarawas River Watershed (HUC 8 subbasin 05040001) and western part of the Upper Ohio River (HUC 8 subbasin 05030101). The Tuscarawas River Watershed covers an area of approximately 2,595 square miles, and the Upper Ohio River covers approximately 3,540 square miles. Surface water features are the Tuscarawas River tributaries to the north and southwest within the county and the Ohio River tributaries to the east. Overall, the hydrology of the region is largely influenced by seasonal precipitation, snowmelt, and groundwater recharge.

The two types of groundwater sources in the area are the Quaternary Alluvial aquifers and the Lower Pennsylvanian and Upper Mississippian age sedimentary bedrock aquifers of the Appalachian Plateaus. The Quaternary Alluvial aquifers consist of clay, sand, silt, and unconsolidated gravel and are generally unconfined. The bedrock aquifers are generally confined and dip gently to the southeast, comprised of sandstones, conglomerates, siltstones, shales, limestones, clays, and coals (Collins, 1979). A stratigraphic view of the Appalachian Plateau near the AoR is shown in Figure 61, and a cross-sectional view is shown in Figure 25.

Bedrock aquifers are grouped into three units in this discussion: the Conemaugh Group, Allegheny Group, and Pottsville Group. Each of these units has various layers of aquifer and aquitard materials described further in the following subsections.

2.7.1. Hydrogeologic Description

U.S. EPA defines a USDW as having less than 10,000 ppm Total Dissolved Solids (TDS). Water quality samples from bedrock aquifers in the area are sparce and from shallow (<200 ft bgs) sampling points. None of these samples was found to exceed 10,000 ppm TDS. Thus, the determination of the lowermost USDW for the project was based on freshwater/saltwater interface mapping done by the ODNR in 2012 (Riley, 2012) and lithologic well logs from the ODNR water well database.

The following description of freshwater aquifers in the area, which comprise the USDWs, is explained from shallowest to deepest formation. This section describes the generalized stratigraphic section from the ground surface to the bottom of the Pottsville Group, considered to contain the base of freshwater and also defined as the lowermost USDW in the AoR. An illustration of this stratigraphic section is shown in Figure 62.

2.7.1.1. Quaternary Alluvium

The uppermost aquifer unit in the AoR is the unconsolidated quaternary alluvial deposits of the Ohio and Tuscarawas Rivers and their tributaries. This aquifer is the most productive unit in the area and has production rates from 100 to 500 gallons per minute in the outwash deposits of the Sandy Creek Valley. Average production rates decrease in the southeastern part of the county to <3 gallons per minute (Walker, 1991). Alluvium, consisting of stream-deposited or glacially deposited sand, clay, and gravel typically overlain by fluvial silts and clays, is found in the river terraces within the Ohio Valley. The thickness of the alluvium commonly ranges from 50 to 300 ft or greater throughout the state (Stout, 1943).

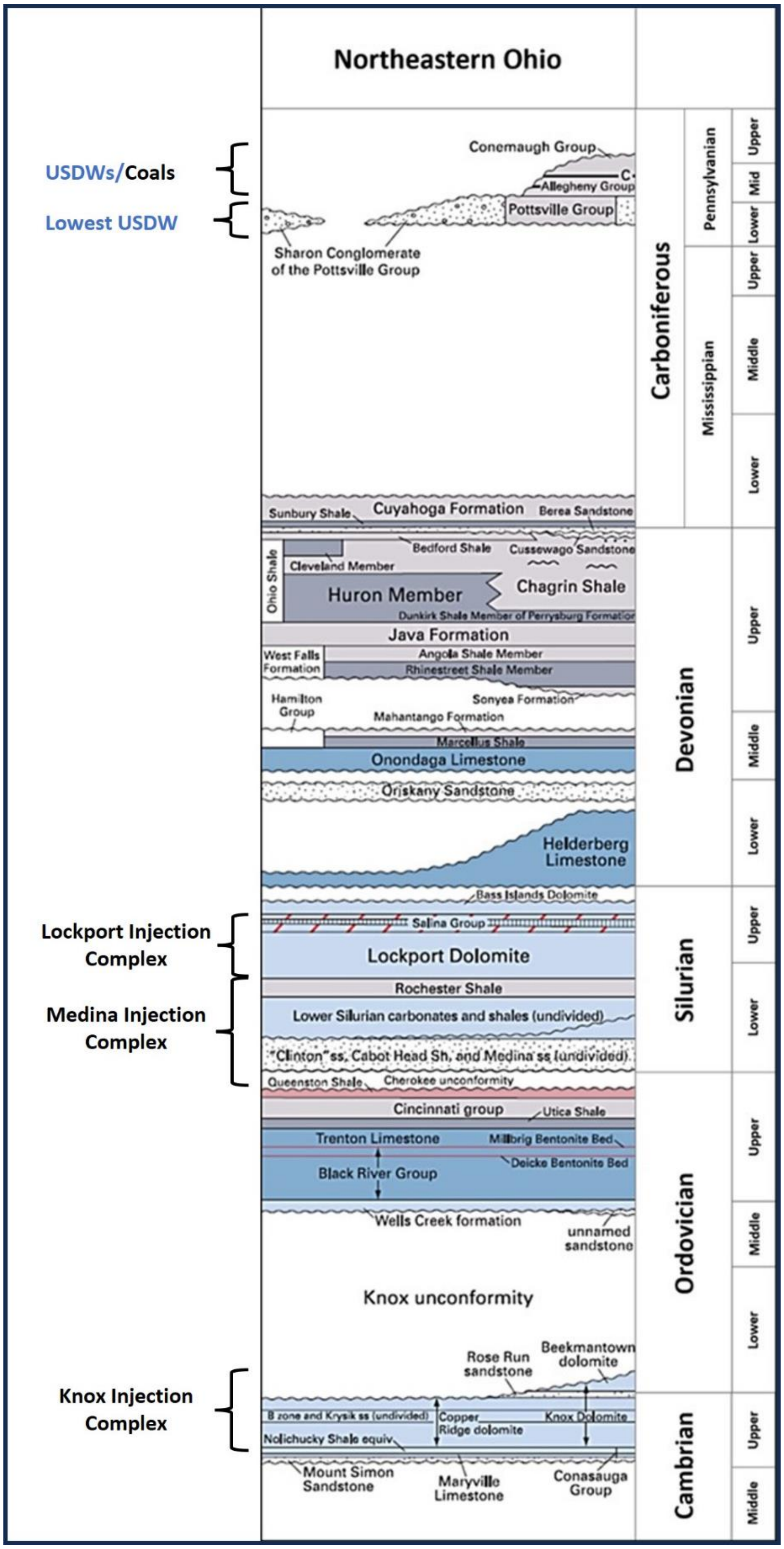

Figure 61: Conceptual stratigraphic column in area near the AoR. Adapted from USGS map (Ryder, 2012).

System	Series	Stratigraphic Unit	Sub-Units	Notes	Lithology
Pennsylvanian	Upper	**Conemaugh Group**		Aquitard	Gray, green, brown and black shale, siltstone, and mudstone with minor limestone and coal
	Middle	**Allegheny Group**		Aquifer	Gray to black shale, siltstone, sandstone, and conglomerate with minor limestone, clay, flint, and coal
	Lower	**Pottsville Group**	Homewood Sandstone	Aquifer	White to tan sandstone, with some shale lenses
			Massillon Sandstone	Aquifer	Gray-white sandstone
			Sharon Sandstone	*Aquifer - Lowermost USDW*	Gray-white to light red tan sandstone, with interbedded conglomerate zones
Mississippian	Upper				Unconformity
	Middle				
	Lower	**Cuyahoga Formation**		Aquifer	Gray to brown shale with interbedded sandstone and siltstone
		Sunbury Shale		Aquitard	Shale

Figure 62: Conceptual stratigraphic column from the AoR illustrating the freshwater aquifers and lowermost USDW. Please refer to Figure 30 for the full stratigraphic column.

2.7.1.2. Conemaugh Group

The Conemaugh Group is Upper Pennsylvanian in age and mainly consists of mudstones, sandstones, and shales with thin coals, clays, and limestones (Collins, 1979). The group is mostly non-marine in origin with some marine units, the Ames or Skelley Limestones, occurring in the lower portion of the group (Stout, 1944). The Conemaugh is present in southeastern Carroll County and absent in the northwestern area of the county (Branson, 1962). Incised valleys in the major drainageways expose the underlying Allegheny Group. The Conemaugh Group extends from the base of the Pittsburgh coal to the top of the Upper Freeport coal. The group also includes the Elk Lick and Mahoning coals and Ames and Brush Creek Limestones.

2.7.1.3. Allegheny Group

The Allegheny Group comprises sequences of sandstone, shale, freshwater and marine limestone, clay, and coal (Branson, 1962). The group is Middle Pennsylvanian in age and is known as a major coal bearing unit but is predominantly made up of sandstones (Stout, 1944). The Group includes the Freeport, Kittanning, and Brookville coals. The group extends from the top of the Upper Freeport coal to the top of the Homewood Sandstone. Within Carroll County, the thickness of this group ranges from approximately 200 ft in the southeast to 150 ft in the northwest (Branson, 1962).

2.7.1.4. Pottsville Group

The Pottsville Group averages around 260 ft in thickness and consists of predominantly sandstones, conglomerates, and shales, and thin layers of limestones, coals, and shales (Stout et al., 1943). This group includes the Homewood, Massillon, and Sharon formations.

The Pennsylvanian Sharon Sandstone at the base of the Pottsville Group was identified as the lowermost USDW within the AoR with a bottom elevation of approximately 600 ft amsl in the northwest to 150 ft amsl in the southeast (Riley, 2012). The Sharon Sandstone ranges from 10 to 250 ft in thickness and yields petroleum, natural gas, and brine in southeastern Ohio (Stout, 1944).

2.7.2. Groundwater Flow and Principal Aquifer Zones

Groundwater within the shallow Quaternary Alluvium generally flows from higher elevation to lower elevations, towards the major drainageways, ultimately discharging to the Ohio and Tuscarawas Rivers. Groundwater within the bedrock aquifer systems similarly flows from areas of higher elevation to areas of lower elevation, towards the major surface drainageways, but taking a longer and deeper path. The groundwater in these bedrock aquifers flows approximately perpendicular to local tributary streams, through an intricate network of stress-relief fractures and interconnected bedding-plane separations, commonly in a stair-step pattern (Wyrick, 1981). The groundwater within the bedrock likely discharges locally to surface water or may recharge to subregional or regional aquifers (Kozar, 2012). Nevertheless, enhanced permeability of bedrock in valleys, due to stress relief fractures, may result in groundwater flow parallel to and beneath local tributary streams before ultimately discharging to surface-water bodies (Kozar, 2012). The deeper bedrock aquifers usually contain much older water, which is usually brackish and has not been flushed by shallow groundwater circulation.

A potentiometric surface map of consolidated aquifers in Carroll County was obtained from the ODNR (Angle, 2006). This map regionally illustrates the potentiometric surface mirroring the topographic surface, where water flows from higher elevations to lower elevations in both the surficial alluvial aquifers and deeper bedrock formations. Figure 63 shows the generalized groundwater flow directions within the AoR.

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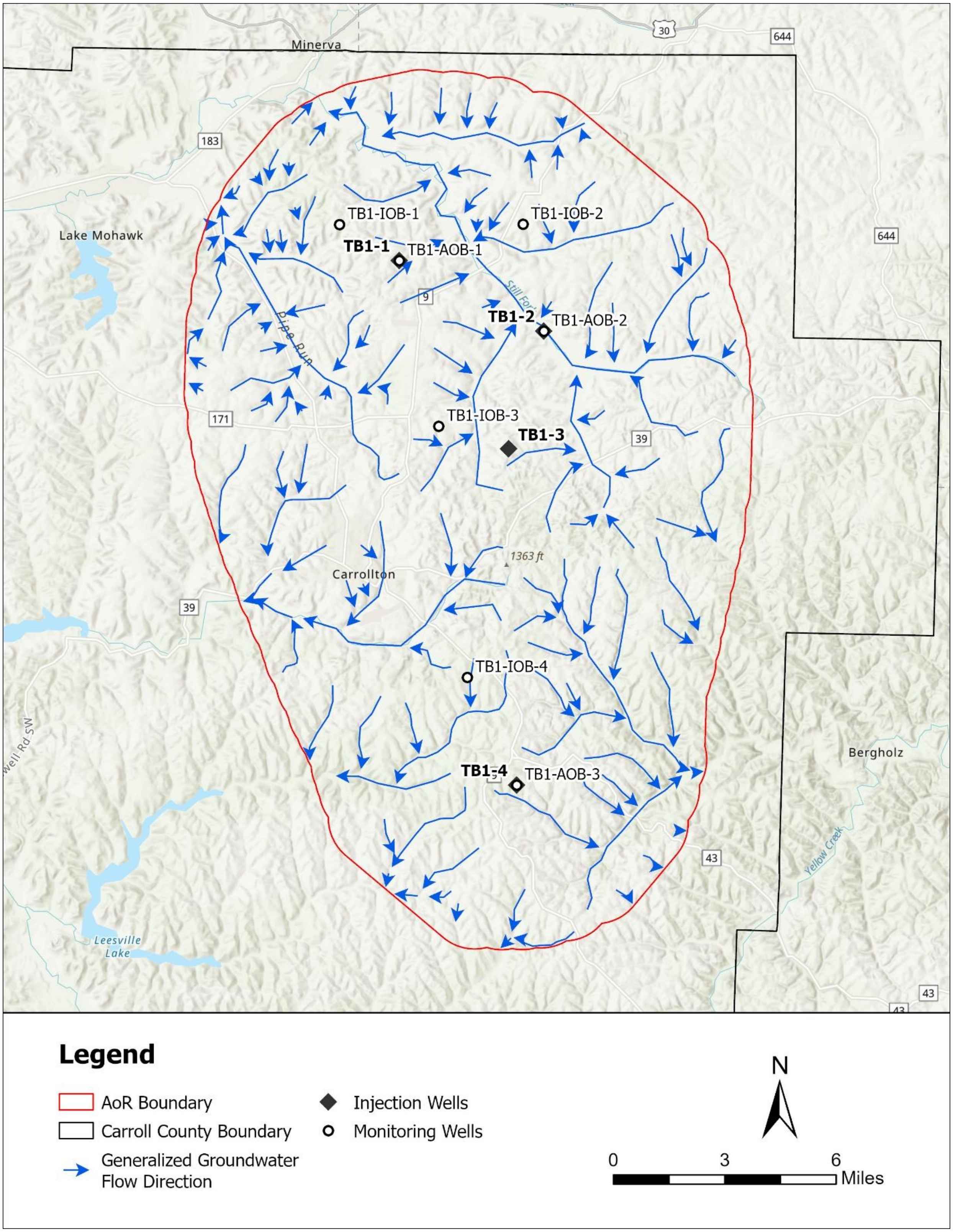

Figure 63: Generalized groundwater flow directions and monitoring and injection wells within the AoR.

2.7.3. Drinking Water Wells in the AoR

Water well completion records were obtained from the ODNR Water Well Database for wells within the AoR in Carroll County, Ohio, for a total of 3,294 records. A map showing the location of these wells is in Figure 64. It is important to note that these are counts of completion records, not active domestic wells, as some may be for monitoring wells or abandoned wells, or were never equipped with a pump. Of the 3,294 records obtained, 2,704 are characterized as drinking water wells, with 2,702 categorized as domestic wells and 2 categorized as municipal wells. Of the 3,294 records within the AoR, 380 records do not have a listed well use, and the remaining 2,914 records are categorized as abandoned, agriculture/irrigation, commercial, dewatering, dry/no water, frack water, heating/cooling, industrial, monitoring, other, public/semi-public, sealed, or test wells. The 2,702 domestic well records within the AoR have depths ranging from 15 to 459 ft bgs. The 2 municipal water wells have depths of 168 and 130 ft bgs. Median well depth for all water well records in the study area is 144 ft bgs. Table 16 summarizes the information contained within these well records, and **Appendix A** contains detailed information on each well record within the AoR.

Table 16: Summary of water well records within the AoR.

Well Use	Number of Wells	Average Total Depth (ft)	Average Static Water Level (ft)
Abandoned	1	80	--
Agriculture/Irrigation	86	200	79
Commercial	4	162	67
Dewatering	1	200	69
Domestic	2,702	156	75
Dry/No Water	4	283	192
Frack Water	1	400	87
Heating/Cooling	6	142	5
Industrial	6	208	73
Monitor	75	87	57
Municipal	2	149	26
Other	5	180	70
Public/Semi-Public	17	244	81
Sealed	1	15	4
Test Well	3	146	40
Unclassified	380	145	73

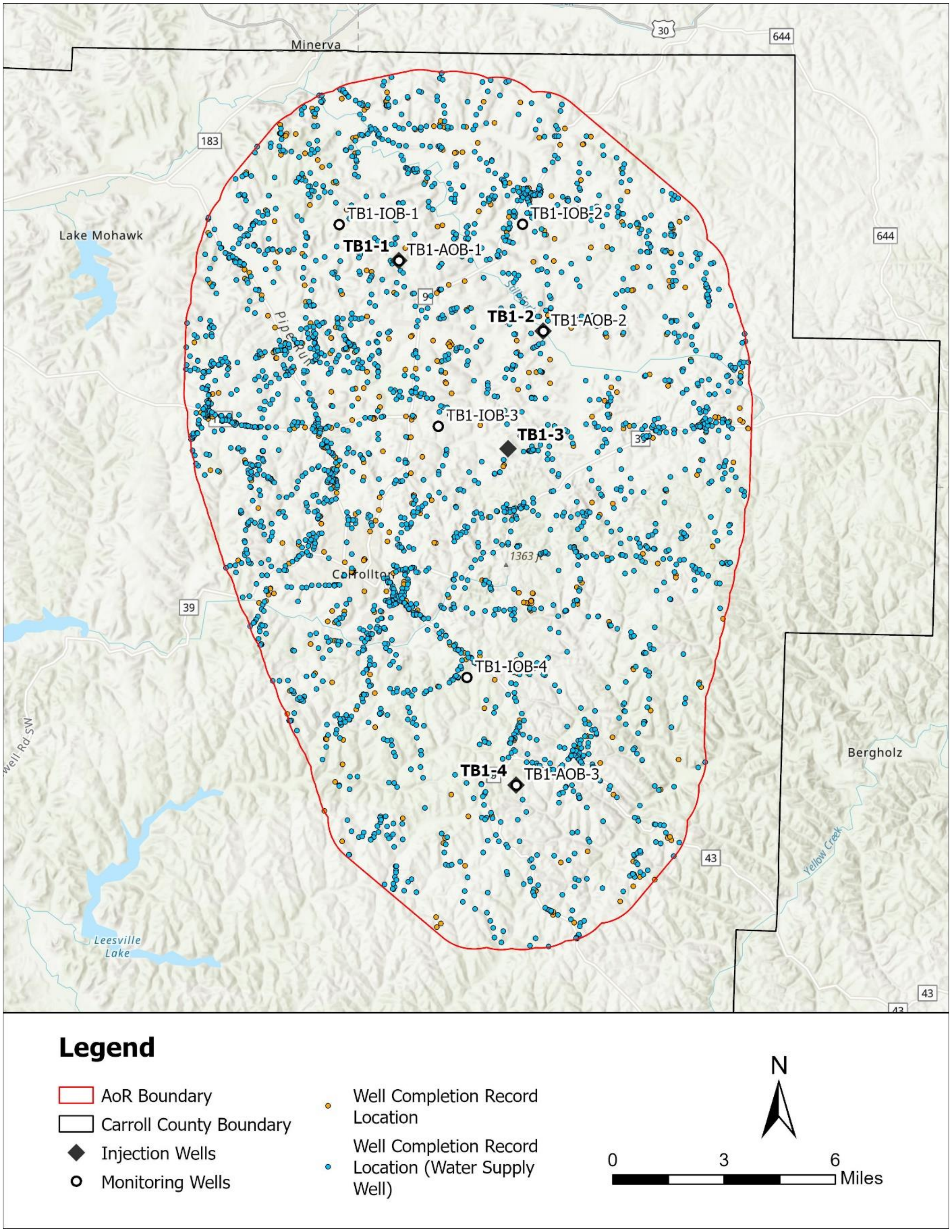

Figure 64: Location of groundwater, monitoring, and injection wells within the AoR.

2.7.4. Water Quality in the AoR

Water quality within the AoR varies with depth and geologic formation. The OEPA divides the state's aquifers into categories to characterize groundwater quality in major aquifers throughout Ohio. Major aquifer types are mapped from ODNR glacial and bedrock aquifer maps (ODNR, 2000). Sand and gravel buried valley aquifers near the surface and sandstone aquifers lie within the AoR. Data collected over a span of 40 years up until 2015 as part of the Ambient Ground Water Quality Monitoring Program (AGWQMP) consists of approximately 164,000 inorganic groundwater quality samples from 282 active wells across Ohio (OEPA, 2015). The data for select chemical constituents is summarized in Table 17**.**

Wells are more commonly affected by bacterial contamination than any other type of contamination in Ohio (Swisshelm and Lane, 1987). The primary source of groundwater bacterial contamination is from onsite sewage systems, mostly septic tanks (Palmstrom, 1984). Data collected by the Ohio Department of Health from 1974 through 1985 included 177,366 samples from private wells and 217,185 samples from public wells analyzed for total coliform. Approximately 28 percent of water samples from private wells (OEPA, 1981) and 8 percent of samples from public wells contained coliform bacteria (OEA, 1980). Additionally, volatile organic compounds (VOCs) and nitrates have been detected in AGWQMP wells. The detection rate for VOCs in groundwater is low at 506 detections from 172,077 analyses. Average nitrate and nitrite values were measured at 0.77 mg/L for sand and gravel aquifers and 0.48 mg/L for sandstone aquifers (OEPA, 2015).

Previous mapping by the ODNR showed the elevation contours of the base of the deepest USDWs in Ohio using other published reports (Riley et al., 2012). This map indicates that the fresh-saline groundwater interface in northern Carroll County occurs in the basal Pennsylvanian Sharon Sandstone from around 150 ft to 600 ft amsl. The USDW map contours exclude the southern part of Carroll County because, "The lenticular, braided, intertwining nature of these deposits prohibits reliably naming and mapping a lowest USDW across any appreciable portions of this [the southeastern part of Ohio]" (Riley et al., 2012).

Increased groundwater residence time generally results in increased mineralization and salinity of the groundwater, depending on mineral solubility within the aquifer. The median well depth for the AGWQMP wells in the sand and gravel aquifers is approximately 90 ft (n=194), and the median depth in the sandstone aquifers is around 220 ft (n=39) (OEPA, 2015). Groundwater wells located in the sand and gravel buried valley aquifers typically have higher TDS, alkalinity, and pH than wells in the sandstone aquifers. Alkalinity, pH, TDS, Sodium (Na), and chloride (Cl) concentrations increase with well depth, while magnesium and calcium decrease. Groundwater in most of Ohio has a dominant calcium bicarbonate composition (Stein, 1974). Southeastern Ohio is characterized by shallow aquifers and coal deposits with calcium magnesium bicarbonate water type (Swisshelm and Lane, 1987).

Table 17: Ambient Ground Water Quality Monitoring Program (AGWQMP) data summary of select constituents from active wells by major aquifer as of July 2015 (OEPA, 2015).

Parameter and Units	Major Aquifer	Mean Value	Median Value	Number of Samples
Chloride (mg/L)	Sand and Gravel	40.6	32	4,046
	Sandstone	54	31.9	778
Hardness, Total as $CaCO_3$ (mg/L)	Sand and Gravel	347	352	3,524
	Sandstone	213	214	702
Iron, Total (µg/L)	Sand and Gravel	1,188	687	4,053
	Sandstone	1,348	335	779
Manganese, Total (µg/L)	Sand and Gravel	195	121	3,971
	Sandstone	225	89	774

2.8. Geochemistry [40 CFR 146.82(a)(6)]

2.8.1. Baseline Fluid Chemistry

Average salinity was calculated and initial fluid chemistry data were collected from the USGS Produced Water Database for the USDWs, the injection zones, and the confining zones and are shown in Table 18 and Table 19 (Blondes et al., 2019). The database was filtered to include regional data from the states of Ohio, Pennsylvania, eastern Kentucky, and West Virginia Figure 65). Anomalous and outlier data points were investigated to determine validity, and in some cases, these data points were removed from the dataset due to their high uncertainty.

The determination of the lowermost USDW for the project relied on freshwater/saltwater interface mapping conducted by the ODNR (Riley, 2012) and lithologic well logs from the ODNR water well database. Water quality samples discussed in subsection 2.7.4 from bedrock aquifers in the AoR are primarily from shallow sampling points (< 200 ft TVD below ground surface) while average TDS calculations in this section are from regional averages with depths > 1000 ft TVD, which accounts for the increase in average calculated TDS for these shallow intervals. Fluid samples will be acquired during the construction of injection wells as part of the Pre-Operational Testing Plan as well as during the construction of the CarbonSAFE stratigraphic test wells to validate or update these data.

The USGS sampling data indicate that the Lockport Dolomite Group (uppermost, secondary injection zone) has an average TDS of 264,717 mg/L, whereas the Salina Group (uppermost, secondary confining zone) averages 256,156 mg/L. No TDS measurements were available for the Rochester Shale, and the calculated average TDS of the Medina Group (primary, middle injection zone) is 266,865 mg/L. TDS measurements for the Queenston Shale (Juniata Fm.) in the project area were unavailable, but in the state of New York, the average salinity is recorded at 216,383 mg/L. The KIC (primary, lowest injection zone), including the Beekmantown Dolomite and Rose Run Formation, have an average TDS > 300,000 mg/L (Table 18). The brines of the intended injection complexes and USDWs are predominantly Na^+ and Cl^- with secondary Ba^{2+}, HCO_3^-,

Ca^{2+}, K^{+}, Mg^{2+}, and SO_4^{2-}. For reference, initial fluid chemistry data collected from the USGS National Produced Waters Geochemical Database for the USDWs, the injection zones, and the confining zones are shown in Table 19Table 19.

Table 18: Regional Total Dissolved Solids (TDS) data for the Primary and Secondary injection complexes. There are no data for the Rochester Formation, and data from the Queenston Shale are described in the text above.

Total Dissolved Solids			
Formation Type	**Formation**	**TDS (mg/L)**	**n =**
Upper Confining (LIC - secondary)	Salina Group	256,156	12
Upper Injection (LIC - secondary)	Lockport Dolomite Group	264,717	11
Middle Injection (MIC - primary)	Medina Group	266,865	376
Lower Confining/Injection (KIC - primary)	Beekmantown Dolomite	379,676	1
Lower Injection (KIC - primary)	Rose Run Sandstone	320,833	13
USDW	Conemaugh Group	22,008	6
USDW	Allegheny Group	15,825	2
USDW	Pennsylvanian (undiff)	36,421	6
Lowermost USDW	Pottsville Group/Salt Sand	71,394	172
Formation below Lowermost USDW	Greenbrier Formation	156,678	10

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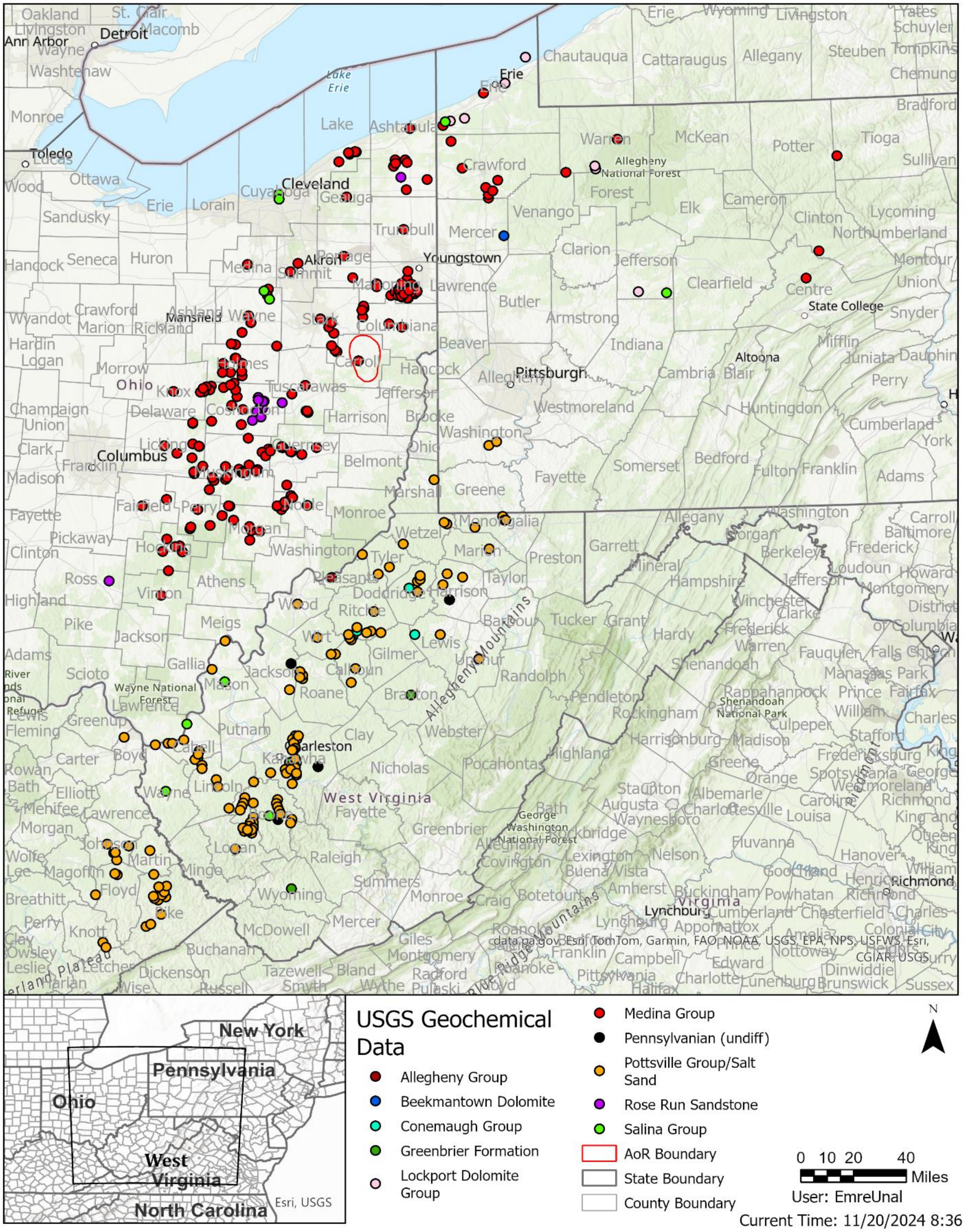

Figure 65: Location map of regional baseline fluid chemistry data from the USGS National Produced Waters Geochemical Database (2019).

Table 19: Regional Baseline Fluid Chemistry data for the primary and secondary injection complexes (upper table) and USDWs (lower table) from USGS (National Produced Waters Geochemical Database, 2019).

Baseline Fluid Chemistry (mg/L)					
Parameter/Constituent	Upper (LIC - secondary)		Middle (MIC - primary)	Lower (KIC - Primary)	
	Salina	Lockport	Medina	Beekmantown	Rose Run
pH	6.1	6.56	5.53	1.21	5.46
Ba^{2+}	700	--	22.2	--	--
HCO^{3-}	211.3	98.9	91.3	208.0	80.7
Ca^{2+}	1,7296.5	2,5202.5	33,238.1	52,889.0	43,000.1
Cl^-	158,758.5	143,949.4	164,034.6	232,741.0	208,059.7
K^+	3,438.1	2,930.7	1,637.8	--	4,169.1
Mg^{2+}	3,012.2	4,907.0	4,055.8	6,100.0	6,479.9
Na^+	76,927.0	71,421.2	59,121.6	78,824.0	68,138.0
SO_4^{2-}	1,971.8	647.6	409.4	93.0	417.7

Baseline Fluid Chemistry (mg/L)					
Parameter/ Constituent	Underground Source of Drinking Water				
	Conemaugh Group	Allegheny Group	Pennsylvanian (undiff)	Pottsville Group/ Salt Sand (Lowest USDW)	Greenbrier
pH	--	--	--	6.9	--
Ba^{2+}	53.3	40.0	--	382.2	--
HCO^{3-}	--	--	--	211.0	68.5
Ca^{2+}	1,070.0	250.0	1,358.0	5,161.4	13,631.7
Cl^-	13,055.0	9,345.0	--	42,878.1	96,744.4
K^+	62.4	45.0	15,762.0	490.8	414.8
Mg^{2+}	295.3	185.5	97.0	1,066.3	3,192.0
Na^+	6,758.8	5,825.0	374.0	19,770.0	41,177.4
$SO4^{2-}$	45.2	167.5	8,134.0	35.9	524.6

2.8.2. Fluid-Rock Interactions

A literature review was conducted to evaluate the potential for reactivity between the fluid and solid phases during injection into the LIC, MIC, and KIC. There are no studies on the injection intervals for the LIC and MIC, so analog studies were reviewed based on the mineralogy of the intended injection complexes discussed in subsection 2.4 of this Application Narrative.

2.8.2.1. *Lockport Injection Complex*

There are currently no studies investigating the fluid-rock reactivity of the Lockport Dolomite. Wang et al. (2013) investigated the reactivity of the mineral dolomite ($CaMg(CO_3)_2$) with water-saturated CO_2 in a series of laboratory experiments performed at 55 and 110 °C to mimic reservoir conditions and at 220 °C to accelerate the reactions at laboratory time scales. Wang concluded that dolomite exhibits no reaction with anhydrous supercritical CO_2 but dissolves and precipitates carbonate minerals when exposed to water-saturated supercritical CO_2. The main drivers for the morphology and composition of the mineral precipitates are temperature and reaction time, though heterogeneity in dolomite mineralogy was not studied. Further, mineral dissolution and precipitation could have an effect on the hysteresis of drainage and imbibition, rock wettability, and capillary pressure, which affect the flowability and trapping of CO_2. The magnitude of these effects was not measured in the study.

2.8.2.2. *Medina Injection Complex*

Minimal quartz chemical dissolution and subsequent porosity changes due to CO_2 injection are expected in the MIC during the life of the project. Mineralogical analysis, discussed in subsection 2.4.3.2 of this Application Narrative, suggests few reactive minerals and cements in the MIC. Feldspars and pyrite are minor constituents, and XRD measured trace amounts of carbonate present in the formation that are unlikely to significantly alter the reservoir matrix during the project. Literature suggests some variability in the cement type and variable interstitial shale beds, so there is the possibility of the presence of reactive minerals (see subsection 2.4.2.2 of the Application Narrative). To date, no work has been performed to model the reactivity of the Medina sandstones with supercritical CO_2. Future testing to address this uncertainty is discussed below.

2.8.2.3. *Knox Injection Complex*

Zerai et al. (2005) modeled the equilibrium and kinetic reactions of the Rose Run Sandstone mineralogy and brine under no-flow conditions. Equilibrium modeling highlighted the critical role of albite, K-feldspar, and glauconite dissolution, with siderite and dawsonite precipitation, in CO_2 mineral trapping in the Rose Run. The dominant precipitated minerals were quartz, muscovite, and microcline, which have opposing negative and positive effects of lowering the injectability or improving sealing capacity. These results are sensitive to both the brine composition and site-specific mineralogy, in addition to temperature and CO_2 fugacity. The kinetic modeling indicated that solubility trapping was key over short timescales, and CO_2 mineral trapping was significant over longer (100,000 years) timescales. The modeling showed that the mineralogy of the Rose Run Sandstone is suitable for significant mineral trapping of CO_2, though the reactions are sensitive to the brine-rock ratio, CO_2 pressure, and the reaction rates. Further modeling for the project will be performed upon site-specific data collection.

2.8.3. Planned Testing and Modeling

The data utilized for evaluating geochemical interactions within the Lockport Dolomite, the Medina Group, and the Rose Run Sandstone (Knox Group) siliciclastic reservoirs are regional and not specific to the project area. Consequently, following the completion of pre-operational testing and logging and data collection for the CarbonSAFE stratigraphic well, it will be determined if reactive transport modeling should be conducted.

Tri-State CCS, LLC will acquire whole core and sidewall core samples from the proposed injection zones to determine the petrophysical and mineralogical properties of the LIC, MIC, and KIC (see Pre-Operational Testing Program). Mineralogical analysis will determine the type percent composition of potentially reactive minerals within the Lockport Dolomite Group, the Medina Group siliciclastics, and the Knox Group at the proposed injection locations.

Tri-State CCS, LLC also plans to gather fluid samples from the injection zone and shallower zones to establish a baseline geochemical description of reservoir fluids. Collected fluid samples are planned to be used to develop synthetic brine compositions to run core flooding studies to assess possible interactions between injected CO_2, reservoir matrix, and in-situ brine. Fluid samples will allow pre- and post- CO_2 injection analysis to determine the changes in brine chemistry, which can be compared with reservoir samples subjected to geochemical testing to assess changes in the rock matrix. If Tri-State CCS, LLC determines geochemical changes to reservoir rock or fluids are prominent as concluded from these tests, a reactive transport model will be built and coupled with the current reservoir model to assess long term fate of injected CO_2 as it is related to mineralogical changes in the reservoir.

2.9. Site Suitability [40 CFR 146.83]

Based on all available data and research presented in this Application Narrative, the project area meets the suitability requirement outlined in the regulations for CO_2 injection. The LIC consists of the Salina Group as the upper confining zone, the Lockport Dolomite as the injection target, and the Rochester Shale, which acts as the lower confining unit for the Lockport Dolomite and the upper confining unit for the MIC. The remainder of the MIC consists of the Medina Group sandstones as the lower injection target and the Queenston Shale as the lower confining unit. The KIC consists of the Wells Creek Formation as the upper confining zone, the Knox Dolomite: consisting of the Copper Ridge Dolomite, Rose Run Sandstone, and Beekmantown Dolomite as the injection target, and the Conasauga Group as lowest confining unit.

The Lockport Dolomite is laterally continuous, averages 300 ft in thickness, and is lithologically variable. It exhibits seven main facies types: (1) mixed intertidal to supratidal dolomite (with a mixed gray biostromal subfacies), (2) interreef or interbioherm dark dolomite, (3) grainstone - shoals, banks, reef flanks, and inter-reef sediments, (4) biohermal dolomite (reefs, bioherms and patch reefs), (5) subtidal crinoidal dolomite, (6) quartzose dolomite associated with barrier island, and (7) shallow subtidal shaley dolomite. The reservoir quality is linked to both the initial depositional facies and diagenetic alteration, which can either occlude or enlarge pores. This variability results in reported ranges of porosities from 1 to 9% and permeabilities of < 0.01 md to 55 md. Wireline logs, core, and petrophysical evaluation from wells in the nearby subsurface resulted in an average model porosity of ~6% and an average permeability of ~1 md.

The MIC is a series of interbedded sandstones, shales, and siltstones, with minor carbonates. They were shed from the Taconic highlands, in a fluvial-deltaic to shallow marine environment, recording 3-4 marine incursions and a sea-level change, as evidenced by the different sand intervals. The sandstones vary in quality due to quartz cementation. Reported porosities range from

2 to 23%, and permeabilities range from 1 md to 40 md, with some oil fields reporting as high as 200 md. In the project's model domain, the average porosity is ~5%, and average permeability is 8 md.

The KIC consists of thick well-cemented carbonates with discrete, but traceable zones of porosity and permeability, and fine to medium grained quartzose to subarkosic, moderate to well sorted sandstone with dolomitic cement. Framework grain analysis of the Rose Run indicates it is mostly Quartzarenite and Subarkose with a composition that is mostly Quartz with secondary cementation. Porosity was found as high as 16.8% in sandstone facies, with intervening dolomitic sandstones closer to 5%. Measured permeabilities range from 70 md to as low as 0.001 md.

Static modeling and simulation of the project area resulted in an average range of total injection volume in the four proposed wells of 3.3 to 8.8 MMt CO_2 in the KIC for the first 30 years of injection and 1.3 to 2.0 MMt CO_2 in the MIC for the second 30 years of injection. Due to the low porosity and permeability in the nearby area, the CO_2 plume does not migrate far from the injection site (~ 1.5-mile radius) during the injection period and the following 50-year PISC period. Using the US-DOE-NETL methods, it was calculated that the LIC has the potential to be able to sequester P10:102.1, P50: 247.6, P90: 461.2 MMt of CO_2. The MIC has the potential to be able to sequester P10: 71.5, P50: 221.1, P90 526.4 MMt of CO_2. The Rose Run Sandstone of the KIC has the potential to be able to sequester P10: 6.8, P50: 21.8, P90: 53.9 MMt of CO_2. Detailed local reservoir characterization from the CarbonSAFE stratigraphic test wells will de-risk the current uncertainties, and data collection from the pre-operational testing for the injection wells will narrow the uncertainty range prior to injection.

Literature review and regional well log analysis indicate the project's confining zone will provide long-term containment of CO_2. The upper confining zone, the Salina Group, consists of laterally extensive, tight dolomites and thick bedded salts and anhydrites across multiple states. This interval is >1000 ft thick in total with a >120 ft thick F4 salt, locally, and has acted as a barrier with two distinct geochemical fingerprints between the petroleum systems younger than the Salina Group and those older than the Salina Group. The Rochester Shale, which sits above the MIC and below the LIC, is >300 ft thick, laterally continuous throughout the region, and reported as impermeable ($1x10^{-6}$ md). The Queenston Shale has a thickness >1,000 ft, has been measured as impermeable, and is laterally continuous across the basin. The Wells Creek Formation is laterally continuous in the region and has acted as a seal to stratigraphic oil and gas accumulations in the underlying units to the east of the project area. Additionally, the Conasauga is laterally continuous, thick, and with sufficient low porosity and permeability (<3%; $1x10^{-6}$ md) to be a competent basal seal to the Knox Group. These confining zones and their historical longevity are robust indicating that secondary confining zone identification is unnecessary.

No faults were identified though 2D seismic interpretation, or literature search, that offset the Salina Group or create leakage pathways to the lowermost USDW. There are, however at least 394 confirmed legacy oil and gas wells that penetrate the caprock within the AoR as seen in Figure 55 of subsection 4.1 of the Area of Review and Corrective Action Plan. These wells are addressed in the plan, along with those wells without depth data, to ensure that the legacy wells are not conduits for potential leakage.

Literature review of the fluid chemistry, injection and confining zone mineralogy, and analogs for the injection complexes suggest that the siliciclastic intervals will have minimal reaction with the injected CO_2. Laboratory analysis of anhydrous CO_2 interaction with dolomite suggests no reaction, but dolomite dissolves and alternate carbonate minerals precipitate when the CO_2 is water saturated. The rate and magnitude of these reactions will be evaluated in the future CarbonSAFE site characterization and pre-operational testing for these systems. Surface and well infrastructure materials are being designed using CO_2 compatible materials and techniques, and the proposed CO_2 stream is dry (>95% CO_2); thus, no adverse interactions are anticipated. Corrosion testing prior to construction will take place to confirm material compatibility.

3. Summary of Other Plans

3.1. Area of Review and Corrective Action Plan

The information and files submitted in the Area of Review and Corrective Action Plan satisfy the federal requirements of 40 CFR 146.84. This plan addresses how the project AoR is delineated and uses corrective action techniques to address all deficient artificial penetrations and other features that compromise the integrity of the confining zones above the injection zones. The AoR encompasses the entire region surrounding the project's injection wells where USDWs may be endangered by injection activity.

The computational model describes modeling of the subsurface injection of CO_2 into the KIC and MIC at the project injection wellsites. The STOMPX-CO2 simulator was used to assess the development of the CO_2 plume, the pressure front, and the long-term outcome of the injected CO_2. Simulation indicated that the maximum extent of the pressure front will be larger than the maximum extent of the CO_2 plumes over the lifetime of the project. Therefore, the AoR for the project is defined as the maximum extent of the threshold pressure front (333 psi for the Rose Run Sandstone), which occurs at the end of 30 years of injection into the KIC, with an additional 1-mile buffer to account for uncertainties in the subsurface data. This plan details the computational modeling, assumptions that were made, and site characterization data that the model was based on to satisfy the requirements of 40 CFR 146.84(c).

A public record search identified 904 existing oil and gas wellbores and 3,294 known water wells within the AoR. Per 40 CFR 146.82(a)(4), wells that penetrate the injection or confining zone within the AoR must be tabulated. None of the water wells penetrate the injection or confining zones, but there at least 20 oil and gas wellbores that may penetrate the upper confining unit for the KIC and at least 408 oil and gas wellbores that may penetrate the upper confining unit for the MIC within the AoR. Depth data was not available for 110 of the oil and gas wellbores identified in the record search. Tri-State CCS, LLC proposes a sequential corrective action and monitoring strategy based on temporal evolution of the threshold pressure boundary for the active zone, beginning prior to injection and ending in the 55th year of injection.

Tri-State CCS, LLC will review the AoR annually during the injection phase and once every five years during the post-injection phase to ensure the initial model predictions are adequate for predicting the extent of the CO_2 plume and pressure front.

AoR and Corrective Action GSDT Submissions
GSDT Module: AoR and Corrective Action ***Tab(s):*** All applicable tabs Please use the checkbox(es) to verify the following information was submitted to the GSDT: ☒ Tabulation of all wells within AoR that penetrate confining zone ***[40 CFR 146.82(a)(4)]*** ☒ AoR and Corrective Action Plan ***[40 CFR 146.82(a)(13) and 146.84(b)]*** ☒ Computational modeling details ***[40 CFR 146.84(c)]***

3.2. Financial Responsibility

Tri-State CCS, LLC has prepared the Financial Assurance Demonstration to comply with federal requirements at 40 CFR 146.85. The plan estimates costs of project activities and provides information on financial instruments that Tri-State CCS, LLC will use to demonstrate Financial Assurance for the following activities: (1) Corrective Action; (2) Injection Well Plugging; (3) Post-Injection Site Care; (4) Site Closure; and (5) Emergency and Remedial Response. The estimated costs of each of these activities are presented in Table 20 below.

Table 20: Cost Estimates for Activities to be Covered by Financial Responsibility.

Activity	Approximate Timeline of Coverage	Total Current Cost Estimate
Corrective Action		
KIC Injection	2027-2057	$26,802,750
MIC Injection	2057-2087	$35,255,925
MIC Monitoring	2057-2087	$ 5,276,250
Injection Well Plugging	2087-2092	$ 739,700
Post-Injection Site Care	2087-2137	$11,296,100
Site Closure	2137	$ 1,487,801
Emergency and Remedial Response	2027-2137	$35,066,334
	Total	**$115,924,860**

Tri -State CCS, LLC will execute a combination of financial instruments prior to construction of the injection wells. These financial instruments will cover the costs of one emergency leakage event as discussed in the Emergency and Remedial Response Plan, all of the costs of injection well plugging as discussed in the Injection Well Plugging Plan, all of the costs of corrective action as discussed in the Area of Review and Corrective Action Plan, and all of the costs of 50 years of PISC and site closure as discussed in the Post-Injection Site Care and Site Closure Plan.

Financial Responsibility GSDT Submissions
GSDT Module: Financial Responsibility Demonstration ***Tab(s):*** Cost Estimate tab and all applicable financial instrument tabs Please use the checkbox(es) to verify the following information was submitted to the GSDT: ☒ Demonstration of financial responsibility ***[40 CFR 146.82(a)(14) and 146.85]***

3.3. Injection Well Construction

The project's injection wells, TB1-1, TB1-2, TB1-3 and TB1-4, will be newly drilled and are designed to accommodate the mass of CO_2 that will be delivered to the project and the subsurface characteristics of the CO_2 injection intervals. Injection well construction is further described in the following plans that are part of this application: (1) Stimulation Program and (2) Construction Details for each injection well.

3.3.1. Proposed Stimulation Program

The Stimulation Program outlines the stimulation measures that the project may use to mitigate drilling-induced damage near the wellbore without interfering with containment, per 40 CFR 146.82(a)(9). It is expected to effectively clear the perforated interval of fines, perforation charge residue, and debris from cement or casing. Additionally, stimulation helps eliminate drilling mud filtrate and dissolved minerals present in the formation. This process is common, as the untreated presence of these elements can lead to elevated downhole injection pressures and reduced injectivity, underscoring the significance of thorough treatment. Specific stimulation fluids, additives, and diverters will be based on injection well site conditions from pre-operational testing results and the type of stimulation needed.

Additionally, treatment may be necessary to mitigate the precipitation of evaporite minerals in and near the well bore due to the high salinity of the injection formation fluids. The precipitation of these minerals reduces well injectivity, impacts pressure buildup by blocking pore space near the wellbore and reduces reservoir porosity and permeability. The current simulation data suggest that salt precipitation is not a problem for the proposed injection intervals over their respective 30-year injection periods; however, further modeling will be performed using additional data collected from the CarbonSAFE stratigraphic test wells planned in the region and pre-operational testing. The necessity for mitigation efforts will be re-evaluated at that time, prior to seeking authorization to inject.

At least 30 days in advance of proposed stimulation, Tri-State CCS, LLC will submit details to the UIC Program Director on the purpose of stimulation, procedures, and stimulation fluids to be used and their anticipated volumes and concentrations.

3.3.2. Construction Procedures

The Construction Details for each injection well describes the analysis conducted and proposed designs for injection wells TB1-1, TB1-2, TB1-3, and TB1-4 that ensure the prevention of the movement of fluids into or between USDWs, that allow the use of testing devices and workover tools, and that allow continuous monitoring of the annulus space between the injection tubing and long string casing, in compliance with 40 CFR 146.86.

The well design for TB1-1 includes a 3.5-inch outer diameter (OD) tubing with 22Cr-110 grade duplex stainless steel (22Cr-110), a maximum injection rate of 0.5 MMt/y into the Knox Injection Complex (KIC) or Medina Injection Complex (MIC), and maximum wellhead pressures of 2,479 psig for the KIC or 1,751 psig for the MIC. The design features a 20-inch conductor casing set at 120 ft, a 13.375-inch surface casing at 803 ft, a 9.625-inch intermediate casing at 1,978 ft, and a 7-inch long-string casing reaching 9,061 ft, with sections of L80 grade steel (L80) and 22Cr-110. The Rose Run Sandstone injection interval will be perforated and isolated with a packer at 8,279 ft. Once the total planned injection volume into the KIC is achieved, the tubing and completion hardware will be retrieved, and the KIC injection zone will be plugged off with CO_2 resistant cement. Then Medina Group injection interval will be perforated and isolated with a packer at 5,531 ft. Injection modeling ensured suitability for tubing sizes, selecting 3.5-inch OD for efficiency. All casing strings except conductor, if driven, will be cemented to the surface using CO_2-resistant cement for critical zones. Tubing and completion hardware will be repurposed between injection intervals. Operational parameters and construction schematics for TB1-1, including perforation plans, are in Figures 12–15 of the Construction Details for TB1-1.

The TB1-2 well design incorporates 3.5-inch OD 22Cr-110 tubing, a maximum wellhead pressure of 2,524 psig for the KIC or 1,765 psig for the MIC, and a maximum injection rate of 0.5 MMt/y into either injection interval. The casing includes a 20-inch conductor set at 120 ft, a 13.375-inch surface casing at 765 ft, a 9.625-inch intermediate casing at 1,840 ft, and a 7-inch long-string casing at 9,249 ft. The Rose Run Sandstone injection interval will be perforated and isolated with a packer at 8,429 ft. Similar to TB1-1, once the total planned injection volume is achieved, the KIC injection zone will be plugged off with CO_2 resistant cement. Then, the Medina Group injection interval will be perforated and isolated with a packer at 5,589 ft. All casing strings except conductor, if driven, will be cemented to the surface using CO_2-resistant cement in critical zones. Tubing and completion hardware will be repurposed between injection intervals. Design details, including perforation and construction schematics for TB1-2, are in Figures 12–15 of the Construction Details for TB1-2.

The TB1-3 well design incorporates 3.5-inch OD 22Cr-110 tubing, a maximum wellhead pressure of 2,588 psig for the KIC or 1,837 psig for the MIC, and a maximum injection rate of 0.5 MMt/y into either injection interval. The casing includes a 20-inch conductor set at 120 ft, a 13.375-inch surface casing at 952 ft, a 9.625-inch intermediate casing at 2,027 ft, and a 7-inch long-string casing at 9,522 ft. The Rose Run Sandstone injection interval will be perforated and isolated with a packer at 8,685 ft. Similar to TB1-1, once the total planned injection volume is achieved, the KIC injection zone will be plugged off with CO_2 resistant cement. Then, the Medina Group injection interval will be perforated and isolated with a packer at 5,866 ft. All casing strings, if driven, except conductor will be cemented to the surface using CO_2-resistant cement in critical zones. Tubing and completion hardware will be repurposed between injection intervals. Design details, including perforation and construction schematics for TB1-3, are in Figures 12–15 of the Construction Details for TB1-3.

The TB1-4 well design utilizes 3.5-inch OD 22Cr-110 tubing, a maximum wellhead pressure of 2,655 psig for the KIC or 1,882 psig for the MIC, and a maximum injection rate of 0.5 MMt/y into either injection interval. The casing program includes a 30-inch conductor set at 120 ft, an 18.625-inch mine string at 548 ft, a 13.375-inch surface casing at 1,101 ft, a 9.625-inch intermediate casing at 2,001 ft, and a 7-inch long-string casing at 9,840 ft. The Rose Run Sandstone injection interval will be perforated and isolated with a packer at 8,897 ft. Similar to TB1-1, once the total planned injection volume is achieved, the KIC injection zone will be plugged off with CO_2 resistant cement. Then, the Medina Group injection interval will be perforated and isolated with a packer at 6,043 ft. All casing strings will be cemented to the surface, utilizing CO_2-resistant cement for critical zones. TB1-4 is located in the geographic extent of a permitted underground coal mine, though no mining has occurred at this location to date. Thus, the TB1-4 well design incorporates a mine string to isolate potential mine voids. The mine string is an 18.625-inch OD J55 casing set at a depth of 548 ft TVD within a 24-inch borehole, extending below the deepest mineable coal seam at 498 ft TVD. The casing is cemented to the surface with a Class A cement (13.3 lb/gal, 654 sacks), ensuring isolation from any mine void. Tubing and completion equipment will be repurposed between injection zones. Additional operational details and schematics for TB1-4 are provided in Figures 13–16 of the Construction Details for TB1-4.

Measures are in place to prevent exceeding fracture gradients or mandated injection pressures. Adjustments may be made based on future reservoir characterization. The final nodal analysis recommends a tubing configuration and operational parameters to ensure pressure and rate limitations are met while considering factors such as zonal isolation and well integrity.

3.4. Pre-Operational Testing Plan

The Pre-Operational Testing Program is designed to meet the requirements of 40 CFR 146.87 and 40 CFR 146.86, ensuring accurate baseline datasets, verification of injection and confining zone characteristics, and compliance with injection well construction requirements. This program will be implemented at all four injection wells (TB1-1, TB1-2, TB1-3, TB1-4) to characterize the MIC and KIC in the project area. The testing program will include a combination of logging, coring, hydrogeologic formation testing, and other activities during the drilling and construction phases of injection and observation wells.

The pre-operational testing will involve sidewall coring and an extensive well logging program, including wireline logging in injection and observation wells. Formation geohydrologic testing, such as pump tests and injectivity tests, will verify the chemical and physical characteristics of the MIC and KIC injection and confining zones. Fracture pressure will be determined using formation testing tools and mini-fracture tests, ensuring borehole stability and optimal cement installation.

This program will determine or verify the depth, thickness, mineralogy, lithology, porosity, permeability, and geomechanical properties of the upper confining zones (Wells Creek Formation, Rochester Shale Formation), lower confining zones (Queenston Shale, Copper Ridge Dolomite), and injection intervals (Medina Group and Rose Run Sandstone). Formation fluid characteristics will also be obtained from the injection intervals to establish baseline data for future comparisons. The wells, including injection and observation types, will support site characterization efforts.

Reports detailing the results of all testing operations, including interpretations, will be submitted to the UIC Program Director within 60 days of completing each injection well. These reports will include data on casing and cement integrity, well logs, core analysis, fluid sampling, and hydrogeologic test results. This ensures that all pre-injection conditions are documented and comply with regulatory requirements.

Upon completion of characterization and testing, the boreholes will be finalized as injection wells. Mechanical integrity tests (e.g., pressure and wireline tests) will verify well construction and integrity. Cement bond, variable density, and temperature logs will confirm the quality of the cement jobs for each well after long-string casing installation, ensuring conformance with project and regulatory standards.

Pre-Operational Logging and Testing GSDT Submissions
GSDT Module: Pre-Operational Testing ***Tab(s):*** Welcome tab Please use the checkbox(es) to verify the following information was submitted to the GSDT: ☒ Proposed pre-operational testing program ***[40 CFR 146.82(a)(8) and 146.87]***

3.5. Well Operation

The Summary of Requirements – Class VI Operating and Reporting Conditions outlines the operational design developed to comply with 40 CFR 146.82(a)(7), 146.82(a)(10), and 146.88 and provides a plan for safe injection into TB1-1, TB1-2, TB1-3, and TB1-4.

Tri-State CCS, LLC aims to safely inject CO_2 at a maximum rate of 0.5 MMt/y in each of the four injection wells, ensuring well integrity while maintaining pressures below 90% of the fracture pressure in the active injection zone. The maximum injection pressures were modeled as 2,479 psig for TB1-1, 2,524 psig for TB1-2, 2,588 psig for TB1-3, and 2,655 psig for TB1-4 for injection into the KIC, or as 1,751 psig for TB1-1, 1,765 psig for TB1-2, 1,837 psig for TB1-3, and 1,882 psig for TB1-4 for injection into the MIC. Operating conditions for all four wells are detailed in Table 1 for the KIC and Table 2 for the MIC of the Summary of Requirements.

Each injection well will be continuously monitored to ensure safe operations and compliance with 40 CFR 146.88(e)(2). Operational monitoring includes real-time observation of injection pressures at the wellhead and downhole, continuous fiber optic temperature monitoring along the wellbore, annular space pressure monitoring, and corrosion coupon monitoring to detect potential corrosion. Details of these monitoring systems are provided in Sections 3.0 and 4.0 of the Testing and Monitoring Plan. All automatic shutdowns will be thoroughly investigated prior to resuming injection to confirm the absence of mechanical integrity issues. If a shutdown or loss of mechanical integrity occurs, Tri-State CCS, LLC will immediately investigate the root cause and take necessary remedial actions as outlined in Appendix A of the Emergency and Remedial Response Plan.

Tri-State CCS, LLC will maintain the mechanical integrity of each well through routine maintenance and workover operations. These operations will be carefully monitored to ensure safety and compliance with 40 CFR 146.88(d). Well maintenance procedures and testing will be reported to the UIC Program Director, as outlined in the Testing and Monitoring Plan. Operational contingency plans include measures to handle potential upset conditions, such as process disturbances or equipment malfunctions. These plans ensure environmental protection by shutting in wells and monitoring pressure fall-off as necessary. Details of these plans are outlined in Section 5 of the Summary of Requirements.

The CO_2 for injection will be sourced from industrial facilities and power plants in the Tri-State area, transported by pipeline to the project site, and injected in a liquid or supercritical phase. Continuous monitoring of the CO_2 stream composition will ensure adherence to specifications, which are detailed in Table 3 of the Summary of Requirements.

To mitigate CO_2-induced corrosion risks, Tri-State CCS, LLC will adhere to monitoring practices outlined in Section 5 of the Testing and Monitoring Plan. Tri-State CCS, LLC will submit semi-annual operating reports to the UIC Program Director, including injection data, monitoring results, and any events impacting mechanical integrity. Reporting requirements are fully detailed in Section 6 of the Summary of Requirements.

3.6. Testing and Monitoring Plan

The Testing and Monitoring Plan outlines how Tri-State CCS, LLC will monitor the project to ensure it does not endanger USDWs, meeting the requirements of 40 CFR 146.90. Monitoring and testing data will track the CO_2 plume and pressure front, validate and refine geological models and simulations, support AoR re-evaluations, and demonstrate non-endangerment. A Quality Assurance and Surveillance Plan, meeting the requirements of 40 CFR 146.90(k), is included as an appendix to this plan.

Tri-State CCS, LLC plans to drill and monitor up to 19 wells for the project, including four in-zone observation wells in the Knox Group and Medina Group, three above-zone observation wells in the first permeable interval above the confining zone, four deep observation wells in the Sharon Sandstone (lowermost USDW), and up to four shallow USDW observation wells in the Pennsylvanian unit. Note that the first permeable unit above the confining zone for each injection complex will be defined as the first unit having porosity >/= 3% and permeability >/= 1 md. These cutoffs are subject to change based on subsurface data collected for the CarbonSAFE stratigraphic wells and the pre-operational testing planned for each injection well. Details on these wells and their approximate depths are provided in Table 1 of the Testing and Monitoring Plan, with proposed monitoring activities and frequencies summarized in Table 3.

The Testing and Monitoring Plan incorporates direct and indirect monitoring technologies to observe:

- Injectate composition per Section 3 of the plan (40 CFR 146.90(a));
- Operational parameters per Section 4 of the plan (40 CFR 146.90(b));
- Corrosion of well materials and components per Section 5 of the plan (40 CFR 146.90(c));
- Any migration of CO_2 or brine above the confining zones per Section 6 of the plan (40 CFR 146.90(d));
- USDW groundwater quality per Section 6 of the plan (40 CFR 146.90(d) and 146.95(f)(3)(i));

- Well integrity over the injection phase per Section 7 of the plan (40 CFR 146.89(c) and 146.90(e));
- Near-wellbore environment using pressure fall-off testing per Section 8 of the plan (40 CFR 146.90(f)); and
- Development of the CO_2 plume and pressure front in the storage formations over time per Section 9 of the plan (40 CFR 146.90(g)).

Testing and Monitoring GSDT Submissions
GSDT Module: Project Plan Submissions ***Tab(s):*** Testing and Monitoring tab Please use the checkbox(es) to verify the following information was submitted to the GSDT: ☒ Testing and Monitoring Plan ***[40 CFR 146.82(a)(15) and 146.90]***

3.7. Injection Well Plugging

The Injection Well Plugging Plan for each injection well describes the process Tri-State CCS, LLC proposes to plug TB1-1, TB1-2, TB1-3, and TB1-4 in conformance with federal requirements at 40 CFR 146.92 and 146.93(e). After completing the planned CO_2 injection into the KIC, the tubing and completion hardware will be retrieved, and the zone will be plugged off with CO_2 resistant cement. The MIC will then be perforated, and the same tubing will be inspected or tested and reused for injection into the MIC. Once the MIC's injection volume is achieved, the well will be plugged and abandoned. Tri-State CCS, LLC may elect to delay plugging the MIC injection zone for monitoring in-zone reservoir conditions post-injection to enhance monitoring of reservoir conditions.

The plugging process and materials are designed to prevent unwanted fluid movement, resist corrosion caused by CO_2/water mixtures, and safeguard USDWs. Prior to plugging either injection zone, the final bottom-hole pressure of the injection wells will be measured, and an inhibited spacer fluid (brine) will be used to flush and fill the wells to maintain pressure control and inhibit corrosion. The measured bottom-hole pressure and temperature will guide the selection of the appropriate weight of brine to stabilize the well and inform decisions regarding the blend of cement needed to plug the well, addressing considerations such as preventing leak-off or premature setting. Mechanical integrity tests (MITs), including external methods such as temperature logs, oxygen activation logs, noise logs, and pulsed neutron logs, will be conducted before plugging. If mechanical integrity is compromised, repairs will be made before proceeding with plugging operations.

The injection tubing, strings, and gauges will be removed from the wells. If the packer cannot be removed after flushing, it will be cut from the tubing and left in the well. The injection zones will be plugged using the retainer method, squeezing CO_2-resistant cement into the perforations. Balanced plugs will be used to isolate the remainder of the well, with CO_2-resistant cement employed in the injection and confining zones and Class A neat cement or equivalent used in shallower plugs. Before injection into the MIC, approximately 50 ft of the long string casing will be milled at the crossover from 22Cr-110 to L80, covering 10-20 ft of the 22Cr-110 section. Once milled, this interval will be squeezed and plugged off with CO_2 resistant cement. 50 ft of CO_2 resistant cement balanced plug will be placed at the top of the retainer, converted to a mechanical plug, and the MIC injection interval will be perforated to begin injection.

Tri-State CCS, LLC will submit updates to the plan, notifications, and reports as detailed in subsection 5.1 of the Injection Well Plugging Plan for each injection well. This includes delayed plugging notifications, 60-day notifications prior to plugging, and well plugging reports to ensure regulatory compliance and transparency.

Injection Well Plugging GSDT Submissions
GSDT Module: Project Plan Submissions ***Tab(s):*** Injection Well Plugging tab Please use the checkbox(es) to verify the following information was submitted to the GSDT: ☒ Injection Well Plugging Plan ***[40 CFR 146.82(a)(16) and 146.92(b)]***

3.8. Post-Injection Site Care and Site Closure

The Post-Injection Site Care and Site Closure Plan outlines activities Tri-State CCS, LLC will undertake to meet the requirements of 40 CFR 146.93. Monitoring will continue for 80 years post-injection for the Rose Run Sandstone and 50 years for the Medina Group, focusing on groundwater quality, CO_2 plume, and pressure front tracking. Monitoring will not cease until a demonstration of non-endangerment of USDWs is approved by the UIC Program Director under 40 CFR 146.93(b)(3). Upon site closure approval, all monitoring wells will be plugged, the site restored, and a closure report submitted.

Pre- and post-injection modeling shows pressure in the Rose Run Sandstone dropping below critical thresholds 15 years post-injection and in the Medina Group after 19 years post-injection. Figures 1 through 4 in the Post-Injection Site Care and Site Closure Plan illustrate pressure differential trends, CO_2 plume extent, and predicted pressure fronts. Monitoring includes groundwater sampling, pressure and temperature measurements, and direct and indirect plume tracking, as detailed in Tables 1 through 6 of the plan. Results will be reported annually within 60 days of the injection cessation anniversary.

Non-endangerment demonstrations will utilize monitoring data and computational modeling to confirm reservoir stability and USDW protection. Plume behavior, pressure decline, and groundwater quality comparisons to baseline data will validate these findings. All wells will be plugged and abandoned per the Injection Well Plugging Plan for each injection well and applicable state regulations.

Site closure activities include equipment decommissioning, well plugging, and site restoration to pre-injection conditions. A final Site Closure Report, including well plugging details and injection records, will be submitted to the UIC Program Director and retained for 10 years. Records from the post-injection period will also be maintained and submitted as required.

PISC and Site Closure GSDT Submissions
GSDT Module: Project Plan Submissions ***Tab(s):*** PISC and Site Closure tab Please use the checkbox(es) to verify the following information was submitted to the GSDT: ☒ PISC and Site Closure Plan ***[40 CFR 146.82(a)(17) and 146.93(a)]***

3.9. Emergency and Remedial Response Plan

The ERRP describes actions that Tri-State CCS, LLC will take to address an emergency in the AoR that may cause movement of the injection fluid or formation fluid in a manner that may endanger a USDW during the construction, operation, or PISC periods, pursuant to 40 CFR 146.82(a)(19) and 146.94.

Examples of potential risks include: (1) injection or observation well integrity failure, (2) injection well monitoring and/or surface equipment failure, (3) natural disaster, (4) fluid leakage into a USDW, (5) CO_2 leakage to USDW or land surface, or (6) an induced or natural seismic event. In the case of one of the listed risks, site personnel, project personnel, and local authorities will be relied upon to implement this ERRP. Tri-State CCS, LLC will communicate to the public any event that requires an emergency response, as described in the ERRP, to ensure that the public understands what happened and whether there are any environmental or safety implications. This will include a detailed description of what happened, any impacts to the environment or other local resources, how the event was investigated, what actions were taken, and the status of the remediation.

If Tri-State CCS, LLC obtains evidence that the injected CO_2 stream and/or associated pressure front may cause an endangerment to a USDW, Tri-State CCS, LLC will perform the following actions:

1. Initiate shutdown plan for the injection well(s).
2. Take all steps reasonably necessary to identify and characterize any release.
3. Notify the 24-hour Emergency Contact (Appendix B of the ERRP) followed by the UIC Program Director within 24 hours of the emergency event, per 40 CFR 146.91(c).
4. Implement applicable portions of the approved ERRP.

The emergency contact list in Appendix B of the ERRP will be updated annually at a minimum, and the ERRP will be reviewed at least once every five years following its approval as well as within one year of an AoR reevaluation and following any significant changes to the injection process or the injection facility or an emergency event. Periodic training will be provided, not less than annually, to construction personnel, well operators, project safety personnel, environmental personnel, the operations manager, and corporate communications. The training plan will record that the necessary personnel have been trained and possess the required skills to perform their relevant emergency response activities described in the ERRP.

Emergency and Remedial Response GSDT Submissions
GSDT Module: Project Plan Submissions ***Tab(s):*** Emergency and Remedial Response tab Please use the checkbox(es) to verify the following information was submitted to the GSDT: ☒ Emergency and Remedial Response Plan ***[40 CFR 146.82(a)(19) and 146.94(a)]***

3.10. Injection Depth Waiver and Aquifer Exemption Expansion

No injection depth waiver or aquifer exemption expansion is required in this application.

3.11. Optional Additional Project Information [40 CFR 144.4]

Because the project is receiving federal funding under the CarbonSAFE initiative, potential impacts to natural resources will be evaluated through the National Environmental Policy Act (NEPA) process with the U.S. Department of Energy as the Lead Agency. Permanent surface impacts of the project will be limited to about 1 acre at each well site, while temporary surface impacts during construction will be about 4 acres at each well site. No demolition of existing structures is planned for the project at this time.

The following is provided to help with determining other federal laws that may be applicable to development of the project:

- No national wild and scenic rivers protected under the Wild and Scenic Rivers Act are found within the AoR.
- There are 6 properties in the AoR listed or eligible for listing in the National Register of Historic Places under the National Historic Preservation Act of 1966; three of them are within the 80 and 110-year CO_2 plumes. Two historic sites are approximately 0.3 miles to the northeast of TB1-2, and one historic site is approximately 1.3 miles northeast of TB1-2 (Figure 66).
- U.S. Fish and Wildlife Service's Information for Planning and Consultation tool indicates that there are four federally listed threatened or endangered species protected under the Endangered Species Act that may be present in the AoR: Indiana bat, northern long-eared bat, salamander mussel, and monarch butterfly.
- The AoR is not within a coastal zone protected under the Coastal Zone Management Act.

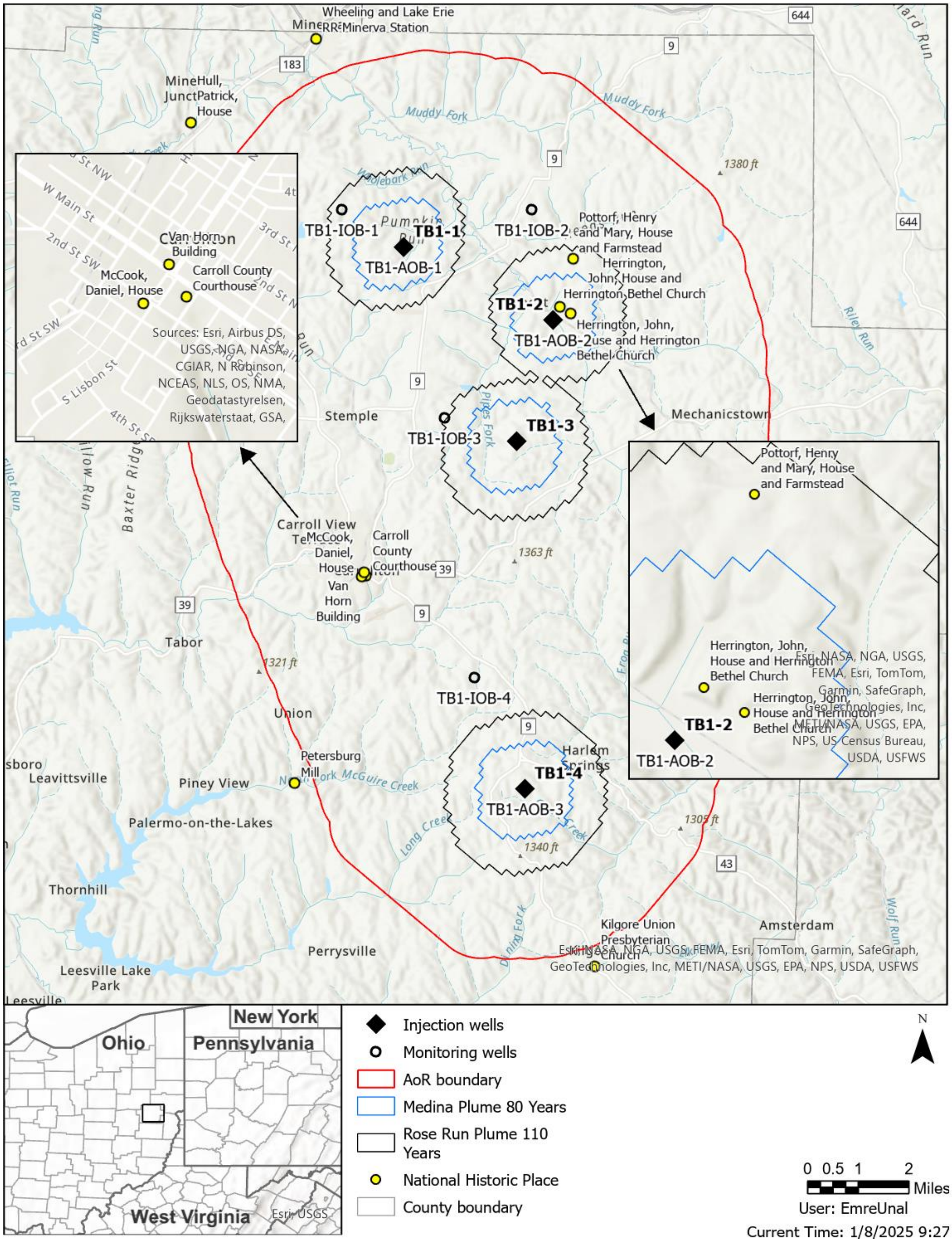

Figure 66: Map of the AoR, injection and monitoring wells, Medina Group and Rose Run Sandstone CO_2 plume at site closure (80 and 110-year plumes, respectively), and national historic places.

3.12. Other Information

No other information is included in the permit application at this time.

However, Tri-State CCS, LLC will provide any other information requested by the UIC Program Director, or new or updated information that is not specifically requested/required but may be useful for the permit application. This section fulfills the requirement at 40 CFR 146.82(a)(21).

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5. Appendix A: Detailed Water Well Completion Records for the Area of Review in Carroll County, Ohio

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
1	248366	LEE	79	24	9/8/1960	SHALE			40.495556	-81.053524
2	474193	LEE	105	70	10/25/1975	SHALE		DOMESTIC	40.494368	-80.971447
3	491634	LEE	165	100	8/5/1976	SHALE	33	DOMESTIC	40.493968	-80.969529
4	184965	LEE	212	80	7/8/1957	SAND	50	DOMESTIC	40.528137	-81.025271
5	184989	LEE	67	30	4/19/1958	GRAVEL		DOMESTIC	40.521659	-81.026826
6	296869	LEE	109	65	11/5/1963	SHALE		DOMESTIC	40.553514	-81.051727
7	427543	LEE	75	40	4/12/1973	SHALE		DOMESTIC	40.548183	-81.046841
8	296866	LEE	96	60	9/20/1963	SHALE	20	DOMESTIC	40.555442	-81.053276
9	49446	LEE	171	110		FIRE CLAY		DOMESTIC	40.546291	-80.979247
10	152954	LEE	60	33	7/26/1955	SANDSTONE		DOMESTIC	40.540080	-80.990032
11	160144	LEE	102	80	5/17/1957	SHALE	20		40.529796	-80.997706
12	339927	LEE	82	6	3/22/1966	SHALE	21	DOMESTIC	40.531128	-80.985687
13	387876	BROWN	187	100	5/3/1969	SHALE	180		40.681124	-81.123411
14	406670	BROWN	105	60	10/9/1970	SHALE		DOMESTIC	40.672989	-81.107182
15	355483	BROWN	85	63	5/12/1967	SHALE	4	DOMESTIC	40.716645	-81.094246
16	355500	BROWN	104	59	6/11/1967	SHALE		DOMESTIC	40.716243	-81.093253
17	394360	BROWN	75	55	11/15/1969	COAL	75	DOMESTIC	40.716682	-81.093166
18	455416	BROWN	65	16	6/22/1973	SHALE	50	DOMESTIC	40.715327	-81.091885
19	464183	BROWN	80	30	6/16/1974	SHALE		DOMESTIC	40.715327	-81.091885
20	541087	BROWN	59	29	11/21/1979	SHALE		DOMESTIC	40.715327	-81.091885
21	64751	AUGUSTA	41	14	8/26/1948	SAND		DOMESTIC	40.712770	-81.085726
22	89163	AUGUSTA	45	12	9/8/1951	SHALE	25	DOMESTIC	40.669140	-81.032562
23	92697	AUGUSTA	138		10/29/1953	SHALE	135		40.676705	-81.054567
24	143596	AUGUSTA	232	130	9/23/1955	SHALE	67	DOMESTIC	40.686204	-81.017144
25	143775	AUGUSTA	135	110	6/5/1954	SHALE	115		40.650082	-81.013417
26	186926	AUGUSTA	40		3/8/1957	SHALE	27	DOMESTIC	40.689121	-81.051884
27	455417	AUGUSTA	53	21	6/25/1973	SHALE	5	DOMESTIC	40.692621	-81.064385
28	464241	AUGUSTA	47	21	8/16/1974	SHALE	4	DOMESTIC	40.693691	-81.068798
29	202496	AUGUSTA	165		7/31/1958	SHALE			40.698989	-81.054343
30	318445	AUGUSTA	124	90	9/3/1965	SANDSTONE	70	DOMESTIC	40.706176	-81.041607
31	1021419	AUGUSTA	366	126	12/15/2019	SANDSTONE & SHALE	9	DOMESTIC	40.695939	-81.035284

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
32	64773	AUGUSTA	142	124	5/25/1950	SAND	12		40.680868	-81.040296
33	143576	AUGUSTA	60	2	5/24/1955	SANDSTONE	57	DOMESTIC	40.687543	-81.034568
34	285534	AUGUSTA	240	173	5/20/1963	SANDSTONE	7	DOMESTIC	40.684619	-81.034545
35	396658	AUGUSTA	226	180	9/23/1969	SHALE	30	DOMESTIC	40.684731	-81.036539
36	1016815	AUGUSTA	106	26	9/18/2014	SANDSTONE	4	DOMESTIC	40.677167	-81.041950
37	883749	AUGUSTA	178	97	3/24/1999	SHALE	5	DOMESTIC	40.676610	-81.044520
38	829659	AUGUSTA	200	55	7/9/1996	SANDSTONE		AGRIC/IRRIG	40.682822	-81.035675
39	836957	AUGUSTA	220	100	8/14/1996	SANDSTONE	3	DOMESTIC	40.683203	-81.038424
40	797366	AUGUSTA	223	164	6/23/1996	SANDSTONE	29	DOMESTIC	40.683798	-81.036519
41	930570	AUGUSTA	222	165	10/20/2001	SHALE		DOMESTIC	40.684320	-81.036130
42	957257	AUGUSTA	222	180	12/10/2002	CLEANOUT		DOMESTIC	40.684320	-81.036130
43	992545	AUGUSTA	85	52	1/6/2006	SANDSTONE	5	DOMESTIC	40.685570	-81.039170
44	1007092	AUGUSTA	225	158	11/3/2008				40.685567	-81.039167
45	3002954	AUGUSTA	220	180	8/22/2022	SANDSTONE		DOMESTIC	40.684889	-81.034635
46	747194	AUGUSTA	243	190	9/17/1992	SHALE		DOMESTIC	40.685452	-81.035188
47	941611	AUGUSTA	208	155	7/15/2002	SHALE & SANDSTONE	3	DOMESTIC	40.685239	-81.033985
48	955602	AUGUSTA	125	60	9/20/2002	SANDSTONE		DOMESTIC	40.676120	-81.045140
49	64765	AUGUSTA	118	32	1/16/1950	SHALE	11		40.672692	-81.010877
50	92669	AUGUSTA	208	165		SHALE		DOMESTIC	40.687670	-81.021715
51	92670	AUGUSTA	110	70		SAND	20	DOMESTIC	40.684397	-81.021438
52	92677	AUGUSTA	130	90		SAND	26		40.709478	-81.024876
53	202469	AUGUSTA	90		10/4/1957	SHALE	18		40.684106	-81.020608
54	213525	AUGUSTA	25	3	4/5/1959	SAND		DOMESTIC	40.655136	-81.012293
55	241477	AUGUSTA	80	50		SANDSTONE	16	DOMESTIC	40.663708	-81.015949
56	255354	AUGUSTA	180	105		SHALE		DOMESTIC	40.709478	-81.024876
57	276527	AUGUSTA	125	20	10/12/1962	SHALE	114	DOMESTIC	40.651610	-81.014176
58	296878	AUGUSTA	210	145	1/16/1964	SHALE	64	DOMESTIC	40.684921	-81.021463
59	328203	AUGUSTA	120	55	11/12/1965	SHALE			40.687692	-81.020808
60	353838	AUGUSTA	140	100		SHALE	62	DOMESTIC	40.705004	-81.018173
61	372846	AUGUSTA	246	108	7/11/1968	SHALE	3	DOMESTIC	40.673977	-81.014759
62	387856	AUGUSTA	84	50	11/16/1968	SHALE		DOMESTIC	40.684895	-81.020802
63	411954	AUGUSTA	62		9/8/1970	SHALE		DOMESTIC	40.652063	-81.012284
64	420833	AUGUSTA	89	50	10/19/1971	SHALE	2	DOMESTIC	40.686404	-81.020631
65	427297	AUGUSTA	140	85	6/3/1974	SANDSTONE	60	DOMESTIC	40.663393	-81.017334
66	427542	AUGUSTA	75	45	3/23/1973	SANDSTONE	6	DOMESTIC	40.679240	-81.018406
67	468483	AUGUSTA	208	100	8/20/1974	SANDSTONE			40.714905	-81.013215

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
68	500301	AUGUSTA	225	160	6/19/1976	SANDSTONE	4	DOMESTIC	40.686555	-81.021563
69	522385	AUGUSTA	264	173	9/12/1978	SHALE	229	DOMESTIC	40.687451	-81.021685
70	626185	AUGUSTA	291	172	11/2/1985	SHALE		DOMESTIC	40.687443	-81.021681
71	750756	AUGUSTA	133		8/28/1992	GRAVEL		DOMESTIC	40.584097	-81.071996
72	718767	AUGUSTA	150	80	11/13/1991	SHALE		DOMESTIC	40.655812	-81.012747
73	516380	AUGUSTA	89	35	9/24/1977	SANDSTONE	10	DOMESTIC	40.659207	-81.013550
74	613607	AUGUSTA	120	60	6/29/1984	SANDSTONE	55	DOMESTIC	40.662998	-81.013693
75	1012249	AUGUSTA	145	71	10/1/2009		7	AGRIC/IRRIG	40.665970	-81.019120
76	747176	AUGUSTA	122	60	2/29/1992	SHALE	7	AGRIC/IRRIG	40.666202	-81.011088
77	987602	AUGUSTA	118	27	7/13/2005			DOMESTIC	40.667330	-81.014170
78	992546	AUGUSTA	205	58	1/5/2006		5	DOMESTIC	40.674800	-81.018530
79	901804	AUGUSTA	214	155	10/13/1999	SHALE		AGRIC/IRRIG	40.673970	-81.014150
80	922473	AUGUSTA	300	160	7/25/2001	LOAM	2	DOMESTIC	40.679030	-81.019720
81	952395	AUGUSTA	300	144	10/21/2003	SHALE	4	AGRIC/IRRIG	40.675140	-81.014920
82	930575	AUGUSTA	207	158	12/4/2001	SHALE	1	DOMESTIC	40.680320	-81.020480
83	898289	AUGUSTA	145	48	5/30/2001	SHALE	8	DOMESTIC	40.680631	-81.020238
84	965337	AUGUSTA	315	148	5/14/2005	SANDSTONE	4	DOMESTIC	40.680330	-81.021500
85	902259	AUGUSTA	250	155	9/1/2000	SHALE	3	DOMESTIC	40.675530	-81.015860
86	957253	AUGUSTA	302	160	11/12/2002	SHALE	2	DOMESTIC	40.683770	-81.021150
87	721435	AUGUSTA	204	100	1/5/1992	SANDSTONE	3	DOMESTIC	40.685189	-81.021448
88	624978	AUGUSTA	279	160	3/20/1987	SHALE	4	DOMESTIC	40.686404	-81.020631
89	679116	AUGUSTA	388	172	9/7/1988	SHALE	2	DOMESTIC	40.687415	-81.021536
90	671897	AUGUSTA	209	167	9/9/1990	SANDSTONE	3	DOMESTIC	40.690143	-81.022648
91	598769	AUGUSTA	204	140	3/13/1982	SHALE	8	DOMESTIC	40.705004	-81.018173
92	450392	AUGUSTA	195	68	11/5/1973	SHALE		DOMESTIC	40.707681	-81.016801
93	992584	AUGUSTA	290	154	1/9/2007	SANDSTONE & SHALE	8	AGRIC/IRRIG	40.712933	-81.024117
94	938964	AUGUSTA	245	70	11/5/2002	SANDSTONE		DOMESTIC	40.712770	-81.019870
95	598795	AUGUSTA	172	80	9/22/1983	SHALE		DOMESTIC	40.714905	-81.013215
96	957254	AUGUSTA	302		11/12/2002	SHALE	230		40.683480	-81.020840
97	64313	AUGUSTA	185		8/27/1951	SHALE	175	DOMESTIC	40.695972	-81.069844
98	143776	AUGUSTA	173		6/14/1954	SHALE	166	DOMESTIC	40.702081	-81.077975
99	160574	AUGUSTA	204		5/2/1956	SHALE	197	DOMESTIC	40.708108	-81.085266
100	186924	AUGUSTA	157		3/8/1957	SHALE	150	DOMESTIC	40.702897	-81.079212
101	189943	AUGUSTA	194			SHALE	177	DOMESTIC	40.697252	-81.070545
102	206091	AUGUSTA	152			COAL	142	DOMESTIC	40.703370	-81.079690
103	225543	AUGUSTA	134		10/17/1959	LIMESTONE	127	DOMESTIC	40.701045	-81.073806

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
104	255388	AUGUSTA	208			SHALE	179	DOMESTIC	40.700869	-81.081039
105	269311	AUGUSTA	47		10/19/1961	SHALE	43	DOMESTIC	40.688972	-81.057617
106	269315	AUGUSTA	54	8	11/11/1961	SHALE	43		40.676358	-81.056408
107	269340	AUGUSTA	181		9/22/1962	GRAVEL			40.700869	-81.081039
108	269341	AUGUSTA	167		11/9/1961	SHALE	29		40.700869	-81.081039
109	318411	AUGUSTA	64	22	10/1/1964	FIRE CLAY	30	DOMESTIC	40.650025	-80.995966
110	339947	AUGUSTA	55	18	6/28/1966	SHALE		DOMESTIC	40.667459	-81.046906
111	396683	AUGUSTA	46	20	5/27/1971	SANDSTONE	40	DOMESTIC	40.646961	-80.994325
112	424372	AUGUSTA	105		9/15/1971	FILL MATERIAL		DOMESTIC	40.672828	-81.045363
113	432441	AUGUSTA	46	10	7/28/1972	SHALE		DOMESTIC	40.648471	-81.013448
114	433593	AUGUSTA	66	4	12/13/1972	SHALE	45	COMMERCIAL	40.710830	-81.084878
115	450572	AUGUSTA	51	17	8/9/1973	SANDSTONE	10	DOMESTIC	40.690617	-81.060491
116	455426	AUGUSTA	45	8	7/28/1973	SANDSTONE	36	DOMESTIC	40.647591	-80.995964
117	464212	AUGUSTA	84	52	12/1/1973	SHALE		DOMESTIC	40.688202	-81.058547
118	464231	AUGUSTA	155		6/3/1974	SANDSTONE	148	DOMESTIC	40.704518	-81.082673
119	491624	AUGUSTA	100	30	6/19/1976	SAND	10	DOMESTIC	40.660766	-81.025890
120	522661	AUGUSTA	127	5	5/19/1978	SAND & GRAVEL		DOMESTIC	40.705690	-81.082591
121	716251	AUGUSTA	179	25	11/28/1930	SHALE	1	DOMESTIC	40.712178	-81.085854
122	955302	AUGUSTA	180	90	2/20/2003	SANDSTONE		DOMESTIC	40.712235	-81.083558
123	930565	AUGUSTA	160		8/24/2001	SHALE		DOMESTIC	40.709436	-81.086609
124	987277	AUGUSTA	217	30	9/9/2005	SANDSTONE	183	DOMESTIC	40.704620	-81.080150
125	624996	AUGUSTA	165		8/14/1987	GRAVEL		DOMESTIC	40.705235	-81.080889
126	866817	AUGUSTA	160	1	11/18/2000	MUD		DOMESTIC	40.712610	-81.086840
127	705117	AUGUSTA	145		11/15/1989	WASH		DOMESTIC	40.703180	-81.079555
128	944305	AUGUSTA	180	5	6/26/2002	SAND		DOMESTIC	40.703634	-81.079283
129	743321	AUGUSTA	45	18	1/2/1992	SHALE & SANDSTONE	26	DOMESTIC	40.693547	-81.068321
130	762908	AUGUSTA	65	15	4/28/1996	SHALE		DOMESTIC	40.693217	-81.068010
131	758334	AUGUSTA	65	25	9/18/1992	SHALE		DOMESTIC	40.692996	-81.067436
132	762909	AUGUSTA	185	135	4/30/1993	SHALE		DOMESTIC	40.692068	-81.067969
133	772235	AUGUSTA	105	37	9/7/1943	SHALE		DOMESTIC	40.692947	-81.066027
134	762919	AUGUSTA	165	95	5/26/1993	SHALE	8	DOMESTIC	40.692485	-81.065285
135	725788	AUGUSTA	45	12	8/14/1991	SANDSTONE	25	DOMESTIC	40.693360	-81.065796
136	725755	AUGUSTA	60	23	3/19/1991	SANDSTONE	10	DOMESTIC	40.693279	-81.065487
137	780083	AUGUSTA	65	15	4/1/1994	SANDSTONE	23	DOMESTIC	40.693336	-81.064568
138	854822	AUGUSTA	65	16	9/9/1997	SANDSTONE	9	DOMESTIC	40.692390	-81.060883
139	803466	AUGUSTA	57	17	1/31/1997	SHALE	5	DOMESTIC	40.692270	-81.059887

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140	500348	AUGUSTA	54	15	6/8/1977	SHALE	45	DOMESTIC	40.683681	-81.059843
141	522419	AUGUSTA	54	14	9/29/1977	SHALE	50	DOMESTIC	40.682159	-81.059819
142	601535	AUGUSTA	60	15	7/29/1982	SHALE	10	DOMESTIC	40.681401	-81.058238
143	2034558	AUGUSTA	40	1.6	9/9/2011	SANDSTONE	31	DOMESTIC	40.674650	-81.050167
144	612602	AUGUSTA	115		6/7/1983	SAND & GRAVEL		DOMESTIC	40.674352	-81.042192
145	775511	AUGUSTA	65	15	7/27/1993	VOID	52	DOMESTIC	40.672579	-81.044506
146	3002804	AUGUSTA	128	60	8/18/2022	SANDSTONE		DOMESTIC	40.669998	-81.039273
147	803469	AUGUSTA	59	24	6/21/1997	SHALE	24	DOMESTIC	40.672840	-81.044480
148	2083304	AUGUSTA	70	10	11/19/2020	SANDSTONE	35	DOMESTIC	40.662601	-81.030991
149	820032	AUGUSTA	72	35	7/26/1995	SHALE	2	DOMESTIC	40.662393	-81.028829
150	1008099	AUGUSTA	116	65	6/21/2014	SANDSTONE		DOMESTIC	40.655921	-81.024576
151	847028	AUGUSTA	98	41	7/7/1997	SHALE	7	DOMESTIC	40.662407	-81.026493
152	820071	AUGUSTA	89	31	5/15/1996	SANDSTONE	8	DOMESTIC	40.661909	-81.024861
153	820041	AUGUSTA	53	4	8/28/1995	SHALE	45	DOMESTIC	40.659860	-81.026767
154	716348	AUGUSTA	70	14	4/15/1992	SHALE	2	DOMESTIC	40.653991	-81.023236
155	931401	AUGUSTA	125	41	10/15/2001	SHALE	5	DOMESTIC	40.649800	-81.017430
156	955306	AUGUSTA	94	42	5/19/2003	CLAY & SHALE		AGRIC/IRRIG	40.649800	-81.016820
157	550273	AUGUSTA	53	8	5/24/1980	SANDSTONE	50	DOMESTIC	40.648471	-81.013448
158	2085779	AUGUSTA	62	38	4/27/2021	SANDSTONE		DOMESTIC	40.650885	-81.021478
159	2032968	AUGUSTA	187	133	6/24/2011	SANDSTONE	9	DOMESTIC	40.653500	-81.016333
160	2037710	AUGUSTA	282	177	4/25/2012	SANDSTONE		DOMESTIC	40.652667	-81.027167
161	1012498	AUGUSTA	41	7	12/31/2009			DOMESTIC	40.647810	-81.009160
162	930560	AUGUSTA	195	125	6/27/2001	SHALE	1	AGRIC/IRRIG	40.648490	-80.996710
163	1019679	AUGUSTA	195	91	1/9/2017	SANDSTONE	1	AGRIC/IRRIG	40.648270	-81.004200
164	1019680	AUGUSTA	205	97	4/16/2017	SANDSTONE		AGRIC/IRRIG	40.646410	-81.004310
165	2085259	AUGUSTA	150	57	3/22/2021	SANDSTONE		DOMESTIC	40.650195	-81.003397
166	598791	AUGUSTA	110	35	8/10/1983	SHALE	5	DOMESTIC	40.648851	-81.002549
167	902255	AUGUSTA	150	83	7/31/2000	SANDSTONE	2	DOMESTIC	40.647140	-80.993420
168	3015316	AUGUSTA	110	65	5/31/2024	SHALE		DOMESTIC	40.649822	-81.000342
169	718769	AUGUSTA	72	32	11/14/1991	SHALE	4	DOMESTIC	40.648343	-81.000367
170	2058982	AUGUSTA	100	40	9/14/2016	SHALE	3	DOMESTIC	40.666459	-81.037346
171	937307	AUGUSTA	227		10/4/2001	SANDSTONE & SHALE		DOMESTIC	40.684670	-81.021500
172	120568	AUGUSTA	48	18	1/16/1954	SANDSTONE	8	DOMESTIC	40.684521	-81.005640
173	123484	AUGUSTA	106		8/13/1954	SILT		DOMESTIC	40.699270	-81.055323
174	213543	AUGUSTA	21	85	9/14/1959	SAND		DOMESTIC	40.700114	-81.068771
175	255357	AUGUSTA	80	60		SHALE	30	DOMESTIC	40.699913	-81.059248

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176	289158	AUGUSTA	100	60	5/27/1963	SHALE		PUBLIC/SEMI-PUB	40.698123	-81.049202
177	289159	AUGUSTA	227		6/15/1963	SANDSTONE	25	DOMESTIC	40.682733	-81.009657
178	291280	AUGUSTA	130	50	8/10/1963	SHALE	10		40.685372	-81.012051
179	355473	AUGUSTA	104	80	4/8/1967	SANDSTONE		DOMESTIC	40.698379	-81.041950
180	396659	AUGUSTA	190	150	10/1/1969	SHALE	95	DOMESTIC	40.687891	-81.025344
181	411956	AUGUSTA	151		9/10/1970	SAND	146	DOMESTIC	40.705077	-81.082205
182	411970	AUGUSTA	170		11/13/1970	SAND & GRAVEL		DOMESTIC	40.705077	-81.082205
183	432446	AUGUSTA	113	75	8/16/1972	SAND	3		40.698050	-81.049820
184	473179	AUGUSTA	205	160	6/9/1975	SAND	67		40.687163	-81.022919
185	516364	AUGUSTA	205	125	6/25/1977	SHALE	27	DOMESTIC	40.692946	-81.036586
186	641760	AUGUSTA	127	79	10/2/1983	SANDSTONE		DOMESTIC	40.681761	-81.001750
187	643605	AUGUSTA	280	157	10/25/1984				40.687436	-81.023757
188	909965	AUGUSTA	205	165	10/15/2000	SHALE	8	DOMESTIC	40.687430	-81.023020
189	611553	AUGUSTA	100	87	7/23/1981	SANDSTONE	20		40.700227	-81.071353
190	721457	AUGUSTA	113	75	6/27/1991	SHALE		DOMESTIC	40.700204	-81.071504
191	875627	AUGUSTA	133	53	9/11/1998	SANDSTONE		DOMESTIC	40.700241	-81.062282
192	635623	AUGUSTA	118	49	6/24/1986	SHALE		DOMESTIC	40.700006	-81.056075
193	514519	AUGUSTA	101	57	7/12/1977	SHALE	4	DOMESTIC	40.700115	-81.055492
194	671866	AUGUSTA	111	63	10/26/1988	SHALE	3	DOMESTIC	40.699657	-81.054840
195	671548	AUGUSTA	156	81	7/5/1988	SHALE			40.698283	-81.046704
196	829671	AUGUSTA	150	99	8/19/1996	SANDSTONE	3	DOMESTIC	40.696308	-81.039941
197	1012886	AUGUSTA	225	111	5/7/2013	SANDSTONE	10	DOMESTIC	40.695133	-81.037283
198	1012884	AUGUSTA	185	123	4/16/2013	SANDSTONE	6	DOMESTIC	40.695617	-81.035350
199	1012883	AUGUSTA	145	26	4/16/2013	SANDSTONE	11	DOMESTIC	40.692083	-81.034033
200	998448	AUGUSTA	264	145	11/18/2005	SHALE	8	DOMESTIC	40.690330	-81.031330
201	932479	AUGUSTA	155	50	2/27/2002	CLAY & SHALE		DOMESTIC	40.689440	-81.030560
202	858512	AUGUSTA	151	55	8/23/1997	SANDSTONE		DOMESTIC	40.689885	-81.030682
203	3013298	AUGUSTA	79	50	2/13/2024	SANDSTONE	1	DOMESTIC	40.690000	-81.030556
204	1012885	AUGUSTA	145	50	5/7/2013	SANDSTONE	1	DOMESTIC	40.691500	-81.029633
205	854852	AUGUSTA	150	70	11/12/1997	SHALE	8	DOMESTIC	40.688457	-81.030202
206	883307	AUGUSTA	105	44	8/10/1998	SHALE	6	DOMESTIC	40.689250	-81.030060
207	891160	AUGUSTA	235	170	2/1/2001	CLAY & SHALE	20	PUBLIC/SEMI-PUB	40.689149	-81.028368
208	1010280	AUGUSTA	250	136	5/15/2008	COAL	1	DOMESTIC	40.685506	-81.029226
209	883726	AUGUSTA	300	140	8/18/1998	SANDSTONE	8	DOMESTIC	40.687037	-81.026926
210	573713	AUGUSTA	184	136	11/17/1980	SHALE	4	DOMESTIC	40.686536	-81.024804
211	659072	AUGUSTA	324	153	5/2/1987	SANDSTONE	2		40.687630	-81.024460

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212	642375	AUGUSTA	174	120	8/3/1987	SANDSTONE	40		40.686036	-81.016348
213	692832	AUGUSTA	38	28	6/4/1990	SHALE	15	DOMESTIC	40.685088	-81.007732
214	875613	AUGUSTA	161	96	9/29/1998	SHALE	2	DOMESTIC	40.684080	-81.005890
215	598757	AUGUSTA	61	10	6/4/1981	SHALE	8	DOMESTIC	40.681602	-80.996277
216	820036	AUGUSTA	161	88	8/10/1995	SHALE	2	DOMESTIC	40.678264	-80.996527
217	186920	AUGUSTA	90	28	12/22/1956	SHALE		DOMESTIC	40.672086	-81.079698
218	241471	AUGUSTA	143	100		SAND	64	DOMESTIC	40.719506	-81.035731
219	255351	AUGUSTA	135	92		SAND	40	DOMESTIC	40.716307	-81.036874
220	296764	AUGUSTA	78	39	7/8/1964	SANDSTONE	13		40.713174	-81.038423
221	320321	AUGUSTA	153	94	7/8/1965	GRAVEL & CLAY		DOMESTIC	40.709389	-81.041366
222	429267	AUGUSTA	70	16	5/16/1972	SHALE	20	DOMESTIC	40.685827	-81.049414
223	429268	AUGUSTA	40	15	5/17/1972	SHALE	20	DOMESTIC	40.687284	-81.051208
224	477499	AUGUSTA	63	23	6/2/1976	SHALE	22	DOMESTIC	40.674037	-81.065414
225	491611	AUGUSTA	117	95	3/27/1976	SHALE	10	DOMESTIC	40.683466	-81.049751
226	522376	AUGUSTA	64	12.5	7/26/1978	SHALE	48	DOMESTIC	40.713196	-81.044763
227	2055386	AUGUSTA	80	20	12/15/2015	SHALE & SANDSTONE	6	DOMESTIC	40.672920	-81.080920
228	635625	AUGUSTA	80	23	7/5/1986	CLEANOUT		DOMESTIC	40.673038	-81.072394
229	799321	AUGUSTA	91	14	9/19/1995	SHALE		DOMESTIC	40.672879	-81.072862
230	930572	AUGUSTA	91	14	11/21/2001	COAL	2	DOMESTIC	40.678070	-81.072670
231	642356	AUGUSTA	66	30	8/10/1985	COAL	36		40.669996	-81.068980
232	718754	AUGUSTA	83	15	5/13/1991	SHALE	75	DOMESTIC	40.684418	-81.049901
233	2068744	AUGUSTA	160	1	6/19/2018	SANDSTONE	27	DOMESTIC	40.684580	-81.051010
234	643613	AUGUSTA	169	120	1/10/1985	SHALE		DOMESTIC	40.688135	-81.046397
235	708584	AUGUSTA	169	101	2/19/1990	SHALE		DOMESTIC	40.688349	-81.046410
236	608809	AUGUSTA	70	21.5	1/10/1983	SHALE		DOMESTIC	40.694037	-81.049120
237	516371	AUGUSTA	60	24	8/13/1977	SANDSTONE	34	DOMESTIC	40.694777	-81.049218
238	2022224	AUGUSTA	160	1	5/6/2009	SANDSTONE	46	AGRIC/IRRIG	40.701010	-81.040858
239	643646	AUGUSTA	182	109	10/5/1974	SHALE			40.709389	-81.041366
240	891091	AUGUSTA	91	21	5/22/1999	SHALE	45	DOMESTIC	40.711280	-81.039850
241	987599	AUGUSTA	266	21	6/24/2005		2	DOMESTIC	40.672885	-81.072869
242	123471	AUGUSTA	60		6/17/1954	SHALE	50		40.705782	-81.045281
243	173397	AUGUSTA	86		4/24/1957	SHALE	80	DOMESTIC	40.705138	-81.069823
244	206056	AUGUSTA	65	8	8/2/1957	SAND		DOMESTIC	40.704999	-81.042536
245	225541	AUGUSTA	58		10/12/1959	SANDSTONE	52	DOMESTIC	40.705994	-81.060692
246	244231	AUGUSTA	218		11/18/1960	SHALE	194	DOMESTIC	40.705184	-81.076781
247	427523	AUGUSTA	41	1	7/29/1972	CLAY & SHALE	28	DOMESTIC	40.704836	-81.062865

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
248	433582	AUGUSTA	51	9	9/9/1972	SANDSTONE	15		40.704952	-81.065145
249	454034	AUGUSTA	60		6/12/1973	COAL	42	DOMESTIC	40.705471	-81.051153
250	464240	AUGUSTA	54	15	7/26/1974	SANDSTONE	3	DOMESTIC	40.706590	-81.067563
251	611554	AUGUSTA	75	29	9/1/1981	SHALE			40.711514	-81.083951
252	3009915	AUGUSTA	90	10	8/18/2023	SHALE	52	DOMESTIC	40.705380	-81.071433
253	935362	AUGUSTA	258	2	7/19/2001	SHALE	61	DOMESTIC	40.705220	-81.052580
254	708577	AUGUSTA	54	2	1/9/1990	SANDSTONE	34	DOMESTIC	40.705348	-81.065432
255	922494	AUGUSTA	50	17	11/19/2001	LOAM	19	DOMESTIC	40.705670	-81.062930
256	510339	AUGUSTA	180	10	2/14/1977	SHALE	140		40.705991	-81.057932
257	501547	AUGUSTA	80	15	7/2/1976	SHALE	30	DOMESTIC	40.705830	-81.055482
258	642379	AUGUSTA	40	15	10/20/1987	SANDSTONE			40.705600	-81.053713
259	486501	AUGUSTA	53		6/10/1975	SHALE	18	DOMESTIC	40.705835	-81.052457
260	858502	AUGUSTA	128	14	7/1/1997	SHALE	3	DOMESTIC	40.705896	-81.046310
261	3009107	AUGUSTA	60	6	7/20/2023	SANDSTONE	31	DOMESTIC	40.706878	-81.037409
262	599336	AUGUSTA	75	8	11/20/1983	CLAY/SAND/SHALE			40.702531	-81.016859
263	803446	AUGUSTA	56	10	11/28/1995	SHALE	41	DOMESTIC	40.702926	-81.014709
264	306595	AUGUSTA	182	120	11/10/1968	SHALE	1		40.648219	-81.030958
265	394354	AUGUSTA	145	120	7/8/1969	SANDSTONE	6	DOMESTIC	40.649180	-81.027972
266	464211	AUGUSTA	46	6	11/27/1973	SANDSTONE	4	DOMESTIC	40.646629	-81.042601
267	493383	AUGUSTA	145	100	10/2/1976	SANDSTONE		DOMESTIC	40.648761	-81.029178
268	679110	AUGUSTA	178	124	8/8/1988	SHALE	8	DOMESTIC	40.648560	-81.031142
269	643602	AUGUSTA	178	123	10/10/1984	SHALE	2	DOMESTIC	40.648295	-81.030101
270	160567	AUGUSTA	110	12	12/24/1955	SHALE	36	DOMESTIC	40.706228	-81.073089
271	49409	AUGUSTA	58	10	1/1/1951	SHALE	38		40.679194	-81.028585
272	64324	AUGUSTA	49		8/25/1952	SANDSTONE			40.712816	-81.076369
273	89200	AUGUSTA	80	40		SHALE	45	DOMESTIC	40.649475	-81.060845
274	92679	AUGUSTA	40	15		SHALE	30		40.656696	-81.056779
275	143597	AUGUSTA	27	10	9/23/1955	SHALE	22	DOMESTIC	40.685655	-81.018714
276	173373	AUGUSTA	185		8/14/1956	SANDSTONE	20	DOMESTIC	40.685676	-81.020165
277	213510	AUGUSTA	62	30	9/2/1958	SAND		DOMESTIC	40.680198	-81.026014
278	239975	AUGUSTA	30	5	10/6/1961	SAND		DOMESTIC	40.679211	-81.026336
279	241464	AUGUSTA	35	4		SHALE	25		40.705245	-81.006777
280	241495	AUGUSTA	195	140		SANDSTONE	68	DOMESTIC	40.687327	-81.016222
281	244216	AUGUSTA	220	185	7/18/1960	SANDSTONE		DOMESTIC	40.686298	-81.022057
282	256680	AUGUSTA	191	148	4/12/1961	SANDSTONE		DOMESTIC	40.686541	-81.016256
283	269313	AUGUSTA	188	149	10/31/1961	SANDSTONE	20	DOMESTIC	40.685591	-81.018207

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
284	289183	AUGUSTA	200	175	3/3/1964	SANDSTONE	10	DOMESTIC	40.686878	-81.016968
285	289188	AUGUSTA	56	20	5/27/1964	SANDSTONE	40		40.700470	-81.008688
286	296830	AUGUSTA	88	46	7/29/1965	SANDSTONE		DOMESTIC	40.680608	-81.026818
287	296876	AUGUSTA	68	30	1/6/1964	SANDSTONE			40.685696	-81.022313
288	336371	AUGUSTA	95	10	10/20/1966	SHALE	85		40.660252	-81.045867
289	353805	AUGUSTA	185	140	8/8/1966	LIMESTONE	30	DOMESTIC	40.686487	-81.016292
290	353806	AUGUSTA	37	10	8/8/1966	SANDSTONE	32	DOMESTIC	40.703040	-81.010856
291	353810	AUGUSTA	37	10	8/9/1966	SANDSTONE	32	DOMESTIC	40.702987	-81.010115
292	372048	AUGUSTA	70	35	10/16/1968	SAND		DOMESTIC	40.686215	-81.019471
293	372803	AUGUSTA	73	40	11/6/1967	SHALE	8	DOMESTIC	40.685473	-81.019830
294	396674	AUGUSTA	181	130		SANDSTONE	30	DOMESTIC	40.686116	-81.017168
295	396675	AUGUSTA	80	40		SHALE	40	DOMESTIC	40.686172	-81.021526
296	400703	AUGUSTA	135	75	9/26/1969	SAND		DOMESTIC	40.692968	-81.014676
297	411996	AUGUSTA	98	44	7/7/1971	SHALE		DOMESTIC	40.680608	-81.026818
298	424351	AUGUSTA	68	17	7/16/1971	SAND	4	DOMESTIC	40.696440	-81.009635
299	424353	AUGUSTA	70	20	7/28/1971	SANDSTONE	4	DOMESTIC	40.686222	-81.019996
300	427538	AUGUSTA	78	60	2/20/1973	SANDSTONE		DOMESTIC	40.675635	-81.028697
301	458313	AUGUSTA	45	15	9/25/1973	CLAY & SHALE	16	DOMESTIC	40.655855	-81.058964
302	464247	AUGUSTA	106	37	10/11/1974	SHALE	6	DOMESTIC	40.686161	-81.017920
303	500304	AUGUSTA	134	34	7/7/1976	SHALE	108	DOMESTIC	40.648508	-81.064027
304	516394	AUGUSTA	207	155	4/29/1978	SHALE	46	DOMESTIC	40.686207	-81.018832
305	522389	AUGUSTA	210	138	9/28/1978	SAND	4	DOMESTIC	40.685480	-81.020378
306	532044	AUGUSTA	230	149	11/7/1978	SHALE		DOMESTIC	40.685518	-81.019281
307	716341	AUGUSTA	193	135	2/14/1992	SHALE	3	AGRIC/IRRIG	40.589463	-81.080575
308	643612	AUGUSTA	254	149	1/10/1985	SHALE	4	DOMESTIC	40.685437	-81.023802
309	766953	AUGUSTA	400	131	2/8/1993	SHALE	3	DOMESTIC	40.646868	-81.064553
310	716343	AUGUSTA	127	57	2/25/1992	SHALE		DOMESTIC	40.652794	-81.065130
311	875629	AUGUSTA	84	31	9/18/1998	SHALE		DOMESTIC	40.684960	-81.023270
312	527971	AUGUSTA	73	25	10/19/1978	SANDSTONE	32	DOMESTIC	40.661231	-81.038483
313	1007077	AUGUSTA	145	104	7/2/2008	SANDSTONE	2	DOMESTIC	40.666700	-81.036000
314	718763	AUGUSTA	197	132	9/10/1991	SHALE	6	DOMESTIC	40.668517	-81.030390
315	613632	AUGUSTA	130	85	6/29/1987	SANDSTONE	9	DOMESTIC	40.667506	-81.032926
316	613642	AUGUSTA	150	105	10/25/1987	SHALE	9	DOMESTIC	40.667487	-81.032732
317	1002448	AUGUSTA	177	97	1/9/2007	SHALE		DOMESTIC	40.667500	-81.032500
318	718764	AUGUSTA	151	85	9/14/1991	SHALE	4	DOMESTIC	40.667926	-81.033181
319	955305	AUGUSTA	174	65	5/13/2003	EXISTING WELL		DOMESTIC	40.688340	-81.016660

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320	803429	AUGUSTA	69	20	11/8/1994	SHALE	6	DOMESTIC	40.673054	-81.030724
321	679111	AUGUSTA	162	121	8/22/1988	SHALE	2	DOMESTIC	40.673771	-81.029383
322	370084	AUGUSTA	110	63	9/26/1979	SAND	30		40.674601	-81.029461
323	2057521	AUGUSTA	150	82	6/16/2016	SANDSTONE		DOMESTIC	40.675854	-81.030731
324	491608	AUGUSTA	146	91	2/12/1976	SANDSTONE	20	DOMESTIC	40.676280	-81.028226
325	671885	AUGUSTA	160	90	4/25/1990	SHALE	4	DOMESTIC	40.677316	-81.028370
326	671888	AUGUSTA	204	160	5/9/1990	SHALE	3	DOMESTIC	40.679565	-81.026730
327	965314	AUGUSTA	240	163	10/25/2003	SHALE		DOMESTIC	40.680666	-81.028333
328	477470	AUGUSTA	172	140	9/15/1975	SHALE	4	DOMESTIC	40.680608	-81.026818
329	718755	AUGUSTA	202	160	5/31/1991	SHALE	4	DOMESTIC	40.680813	-81.026564
330	891080	AUGUSTA	252	160	3/15/1999	SHALE	2	DOMESTIC	40.703000	-81.009280
331	1019126	AUGUSTA	192	130	12/14/2017	UNKNOWN		DOMESTIC	40.684000	-81.025288
332	965326	AUGUSTA	112	40	2/7/2003	CLEANOUT	84	DOMESTIC	40.684000	-81.023830
333	395547	AUGUSTA	259	155	11/15/1971	SHALE		DOMESTIC	40.685354	-81.022731
334	716302	AUGUSTA	263	147	7/11/1990	SHALE	4	DOMESTIC	40.684961	-81.023111
335	920831	AUGUSTA	185	150	1/7/2002	MUD	6	DOMESTIC	40.685970	-81.022480
336	747177	AUGUSTA	213	155	3/7/1992	SHALE	3	DOMESTIC	40.686223	-81.022632
337	972721	AUGUSTA	223	147	3/26/2004	MUD	10	DOMESTIC	40.686000	-81.022033
338	1019542	AUGUSTA	265	130	6/22/2017	SHALE		DOMESTIC	40.686272	-81.021008
339	747219	AUGUSTA	207	160	8/9/1994	SHALE		DOMESTIC	40.686189	-81.020377
340	2084004	AUGUSTA	200	115	1/4/2021	SANDSTONE	7	DOMESTIC	40.685664	-81.019646
341	3012043	AUGUSTA	216	165	10/17/2023	SANDSTONE		DOMESTIC	40.686100	-81.019920
342	572351	AUGUSTA	242	160	3/24/1980	SAND		DOMESTIC	40.685564	-81.018778
343	1021420	AUGUSTA	245	135	1/8/2020	ROCK		DOMESTIC	40.685564	-81.019243
344	902187	AUGUSTA	200	138	10/3/1999	SHALE	4	DOMESTIC	40.685705	-81.018730
345	891102	AUGUSTA	201	137	8/6/1999	SHALE	181	DOMESTIC	40.686017	-81.017194
346	938904	AUGUSTA	100	21	7/11/2002	SANDSTONE & SHALE	9	DOMESTIC	40.686970	-81.021480
347	671872	AUGUSTA	201	135	12/14/1988	SHALE	7	DOMESTIC	40.685678	-81.016701
348	400739	AUGUSTA	200	160	7/23/1970	SAND	4	DOMESTIC	40.687261	-81.017051
349	2040919	AUGUSTA	232	151	11/28/2012	SANDSTONE & SHALE	22	DOMESTIC	40.687500	-81.017000
350	598797	AUGUSTA	150	110	10/24/1983	SANDSTONE	5	DOMESTIC	40.695336	-81.011656
351	642384	AUGUSTA	114	60	6/30/1988	SHALE	12		40.692865	-81.014774
352	679112	AUGUSTA	283	164	8/22/1988	SHALE		DOMESTIC	40.692889	-81.014802
353	747202	AUGUSTA	191	140	3/19/1993	SHALE		DOMESTIC	40.697253	-81.010679
354	3009259	AUGUSTA	260	93	7/21/2023	SANDSTONE	8	DOMESTIC	40.675817	-81.028816
355	64314	AUGUSTA	68		9/10/1950	SHALE	38		40.689423	-81.061250

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
356	367363	AUGUSTA	117	34	7/2/1967	COAL	57	DOMESTIC	40.685469	-81.077717
357	944306	AUGUSTA	100		6/27/2002	SHALE & SANDSTONE	44	DOMESTIC	40.685206	-81.084125
358	2084835	AUGUSTA	100	18	2/8/2021	SANDSTONE	29	DOMESTIC	40.688900	-81.061597
359	468474	AUGUSTA	51	8	6/27/1974	SHALE		DOMESTIC	40.683263	-81.071604
360	1019109	AUGUSTA	60	16	6/24/2016	SHALE	8	DOMESTIC	40.683150	-81.071333
361	464196	AUGUSTA	35	34	8/22/1974	SANDSTONE	4	DOMESTIC	40.683328	-81.069834
362	368414	AUGUSTA	30	10	10/1/1969	SAND		DOMESTIC	40.671789	-81.028041
363	427265	AUGUSTA	50	1	7/31/1972	SANDSTONE	44	DOMESTIC	40.672197	-81.029343
364	427511	AUGUSTA	40	1	3/2/1972	CLAY & SHALE	10	DOMESTIC	40.671971	-81.028721
365	861078	AUGUSTA	66	18	11/20/1997	SHALE	7	DOMESTIC	40.672170	-81.030050
366	370077	AUGUSTA	78	10	8/11/1979	SHALE	65	DOMESTIC	40.671472	-81.027078
367	370069	AUGUSTA	192	125	6/30/1979	SHALE	1	DOMESTIC	40.649012	-81.087051
368	429274	AUGUSTA	95	70	7/7/1972	SHALE	12	DOMESTIC	40.673617	-81.049281
369	443625	AUGUSTA	92	60	10/31/1972	SHALE	4		40.656414	-81.072409
370	464157	AUGUSTA	110	60	12/5/1973	SHALE			40.656414	-81.072409
371	493358	AUGUSTA	100		4/14/1976	SHALE	20	DOMESTIC	40.673009	-81.049352
372	492376	AUGUSTA	98	40	9/25/1976	SHALE	30		40.649290	-81.088470
373	1016771	AUGUSTA	154	74	10/1/2012	SHALE		DOMESTIC	40.649250	-81.088600
374	781609	AUGUSTA	304	131	5/2/1994	SHALE		DOMESTIC	40.649286	-81.085866
375	477498	AUGUSTA	245	125	6/1/1976	SHALE	3		40.649755	-81.083899
376	1022537	AUGUSTA	235	52	9/21/2023	COAL	8	DOMESTIC	40.648142	-81.082033
377	500335	AUGUSTA	318	160	3/29/1977	SHALE		DOMESTIC	40.652867	-81.080753
378	573704	AUGUSTA	178	75	9/27/1980	SHALE	4	DOMESTIC	40.656414	-81.072409
379	635620	AUGUSTA	264	89	6/21/1986	SHALE	10	DOMESTIC	40.659769	-81.072280
380	643633	AUGUSTA	285	72	8/3/1985	SHALE			40.656414	-81.072409
381	679129	AUGUSTA	117	71	10/18/1985	COAL	14		40.656852	-81.073346
382	891161	AUGUSTA	128	41	1/18/2001	SHALE		DOMESTIC	40.669690	-81.052170
383	967500	AUGUSTA	250	135	11/24/2004		2	DOMESTIC	40.658610	-81.069440
384	912846	AUGUSTA	125	65	5/18/2000	SHALE	10	DOMESTIC	40.669840	-81.051880
385	930232	AUGUSTA	255	126	5/23/2002	CLAY & SHALE		DOMESTIC	40.669740	-81.051500
386	902212	AUGUSTA	225	136	1/7/2000	SHALE	2	DOMESTIC	40.669940	-81.051750
387	557722	AUGUSTA	223	130	10/17/1980	COAL			40.664872	-81.055404
388	635616	AUGUSTA	220	155	6/5/1986	SHALE		DOMESTIC	40.665343	-81.054880
389	930551	AUGUSTA	220	155	3/20/2001	CLEANOUT		DOMESTIC	40.664370	-81.055770
390	820074	AUGUSTA	181	95	6/18/1996	SHALE	8	DOMESTIC	40.672764	-81.050090
391	957288	AUGUSTA	110	15	5/10/2004	SHALE	2	DOMESTIC	40.674030	-81.049200

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
392	25323	AUGUSTA	43		10/21/1952	SHALE	4		40.713247	-81.076551
393	64325	AUGUSTA	78		8/27/1952	SHALE	68		40.713542	-81.076287
394	160579	AUGUSTA	84	5	6/19/1956	SHALE	12	DOMESTIC	40.712018	-81.076378
395	405248	AUGUSTA	74	46	5/24/1971	SANDSTONE	14	DOMESTIC	40.718043	-81.077680
396	891148	AUGUSTA	135	63	9/11/2000	SHALE	2	DOMESTIC	40.645430	-81.075060
397	3002541	AUGUSTA	171	130	8/12/2022	SHALE		DOMESTIC	40.653892	-81.082861
398	875624	AUGUSTA	267	203	8/22/1998	OLD WELL		DOMESTIC	40.661320	-81.082370
399	3002501	AUGUSTA	140	50	7/13/2022	SANDSTONE	1	DOMESTIC	40.656272	-81.082168
400	875601	AUGUSTA	163	110	4/22/1998	SHALE	2	DOMESTIC	40.661870	-81.081990
401	3003912	AUGUSTA	300	137	10/12/2022	SANDSTONE	2	DOMESTIC	40.668176	-81.086509
402	772240	AUGUSTA	350	124	9/28/1993	SILTSTONE		DOMESTIC	40.660473	-81.083043
403	2057925	AUGUSTA	300	160	6/27/2016	SANDSTONE		DOMESTIC	40.661299	-81.082437
404	2068663	AUGUSTA	80		6/24/2016	SANDSTONE		ABANDONED	40.661299	-81.082437
405	2071374	AUGUSTA	118	82	12/6/2018	SANDSTONE		DOMESTIC	40.661348	-81.082408
406	781584	AUGUSTA	96	61	11/8/1993	SHALE	2	DOMESTIC	40.660713	-81.077930
407	2033994	AUGUSTA	378	34	8/12/2011	SANDSTONE	2	AGRIC/IRRIG	40.663000	-81.082167
408	2004318	AUGUSTA	158	58	8/2/2006	SANDSTONE & SHALE	7	DOMESTIC	40.662330	-81.086670
409	839434	AUGUSTA	156	92	8/17/1996	SHALE	20	DOMESTIC	40.663032	-81.086911
410	781603	AUGUSTA	350	138	3/25/1994	SHALE	2	DOMESTIC	40.668946	-81.087396
411	942259	AUGUSTA	175	120	8/19/2002	SHALE	2	AGRIC/IRRIG	40.668870	-81.087650
412	213532	AUGUSTA	166	100	8/30/1959	SHALE	15	DOMESTIC	40.665356	-81.074000
413	427522	AUGUSTA	45	6	7/21/1972	CLAY & SHALE		DOMESTIC	40.671220	-81.073004
414	477453	AUGUSTA	109	71	3/20/1975	SHALE	4	DOMESTIC	40.671063	-81.074376
415	844756	AUGUSTA	110	43	2/4/1997	SANDSTONE	26	DOMESTIC	40.656469	-81.066051
416	891126	AUGUSTA	208	5.4	12/22/1999	SHALE		DOMESTIC	40.656640	-81.065570
417	500317	AUGUSTA	65	16	11/1/1976	SANDSTONE	6	DOMESTIC	40.663283	-81.070836
418	572363	AUGUSTA	64	12	9/1/1980	SAND	12	DOMESTIC	40.662619	-81.069881
419	573714	AUGUSTA	140	75	11/19/1980	SHALE	15	DOMESTIC	40.666288	-81.074820
420	578655	AUGUSTA	142	29	9/21/1981	SHALE	8	DOMESTIC	40.668958	-81.076360
421	1002463	AUGUSTA	77	10	9/5/2007	SANDSTONE & SHALE		DOMESTIC	40.666333	-81.043500
422	143578	AUGUSTA	41	18	6/15/1955	SHALE	20	DOMESTIC	40.703434	-81.086580
423	424387	AUGUSTA	66		10/19/1971	COAL	60	DOMESTIC	40.698123	-81.087432
424	464177	AUGUSTA	89	50	5/20/1974	SHALE	6	DOMESTIC	40.691082	-81.087410
425	725781	AUGUSTA	70	30	7/30/1991	SANDSTONE		DOMESTIC	40.697100	-81.088982
426	772468	AUGUSTA	242	90	12/1/1993	SANDSTONE		DOMESTIC	40.698898	-81.092245
427	839444	AUGUSTA	63	12	9/28/1996	SHALE	40	DOMESTIC	40.703217	-81.085539

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
428	599374	AUGUSTA	159		10/24/1981	SHALE	115	DOMESTIC	40.703661	-81.083662
429	909968	AUGUSTA	154	5	12/15/2000	SHALE	101	DOMESTIC	40.711680	-81.075480
430	868889	AUGUSTA	80	35	7/9/1998	SANDSTONE		DOMESTIC	40.712047	-81.076029
431	987260	AUGUSTA	140	1	4/25/2006	SANDSTONE	100	DOMESTIC	40.712230	-81.075470
432	898819	AUGUSTA	120	60	11/6/1999	SHALE	88	DOMESTIC	40.720450	-81.074400
433	737613	AUGUSTA	89	19	12/24/1991	SHALE & SANDSTONE	20	DOMESTIC	40.714214	-81.075850
434	552966	AUGUSTA	50	37	9/20/1979	SANDSTONE			40.715937	-81.076151
435	762045	AUGUSTA	95	45	3/11/1993	SHALE		DOMESTIC	40.719146	-81.077244
436	476206	AUGUSTA	250	120	10/25/1974	SHALE		DOMESTIC	40.716031	-81.062794
437	557728	AUGUSTA	154	94	1/19/1981	SANDSTONE	4		40.714315	-81.068025
438	770871	AUGUSTA	63	15	9/20/1994	SHALE	14	DOMESTIC	40.713114	-81.072957
439	971639	AUGUSTA	172	144	8/2/2005		2	DOMESTIC	40.709500	-81.070500
440	666771	AUGUSTA	218			SANDSTONE		DOMESTIC	40.714623	-81.068095
441	844764	AUGUSTA	169	108	7/3/1997	SHALE	18	DOMESTIC	40.716219	-81.063658
442	225542	AUGUSTA	91	10	10/8/1959	SANDSTONE	76	DOMESTIC	40.720048	-81.055531
443	273728	AUGUSTA	114	60		SANDSTONE		DOMESTIC	40.719619	-81.054383
444	433572	AUGUSTA	119	45	7/20/1972	SHALE		DOMESTIC	40.709806	-81.053740
445	504387	AUGUSTA	85		9/14/1976	SHALE	80		40.706698	-81.055406
446	504386	AUGUSTA	115		9/14/1976	SHALE	100		40.707523	-81.055331
447	781612	AUGUSTA	72	28	5/20/1994	SHALE	10	DOMESTIC	40.707397	-81.053672
448	3004725	AUGUSTA	115	42	11/16/2022	SHALE	1	DOMESTIC	40.711944	-81.053889
449	957255	AUGUSTA	131	20	11/17/2002	SHALE	1	DOMESTIC	40.721670	-81.054870
450	884394	AUGUSTA	145	23	5/14/1999	SHALE	37	DOMESTIC	40.714760	-81.056590
451	944318	AUGUSTA	180	60	7/30/2002	LIMESTONE	8	DOMESTIC	40.713530	-81.056500
452	84074	AUGUSTA	50		6/11/1953	SHALE	17	DOMESTIC	40.715047	-81.032187
453	173364	AUGUSTA	126		6/8/1956	SHALE		DOMESTIC	40.718983	-81.029602
454	795244	AUGUSTA	104	65	2/7/1995	SANDSTONE		INDUSTRIAL	40.706919	-81.034340
455	982385	AUGUSTA	125	21	12/10/2004		34	DOMESTIC	40.719350	-81.028720
456	527975	AUGUSTA	124	110	11/13/1978	SHALE	108	DOMESTIC	40.705065	-81.009498
457	747209	AUGUSTA	81	38	7/23/1993	SHALE	17	DOMESTIC	40.706039	-81.010285
458	2021433	AUGUSTA	70	20	3/19/2009	SHALE	40	DOMESTIC	40.710500	-81.008567
459	797365	AUGUSTA	132	44	6/17/1996	SANDSTONE	16	DOMESTIC	40.712282	-81.007942
460	772241	AUGUSTA	350	124	9/28/1993	SILTSTONE	265	DOMESTIC	40.660486	-81.083089
461	49408	AUGUSTA	136	106		SHALE	35		40.663440	-81.084103
462	573702	AUGUSTA	148	45	9/17/1980	COAL	5	DOMESTIC	40.667135	-81.087064
463	984663	AUGUSTA	180	138	6/26/2008	SANDSTONE	37	DOMESTIC	40.657000	-81.076170

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464	527983	AUGUSTA	125	75	5/31/1979	SANDSTONE	8	DOMESTIC	40.666871	-80.997409
465	981433	AUGUSTA	180	112	8/25/2005	SANDSTONE & SHALE	8	DOMESTIC	40.665333	-81.004333
466	861090	AUGUSTA	129	85	1/4/1999	SHALE		DOMESTIC	40.662830	-81.008060
467	891130	AUGUSTA	192	109	2/21/2000	SAND & ROCK		AGRIC/IRRIG	40.662830	-81.008060
468	1019123	AUGUSTA	255	117	8/15/2017	SHALE		AGRIC/IRRIG	40.670160	-80.996735
469	491641	AUGUSTA	146	95	10/14/1976	SANDSTONE	53	DOMESTIC	40.660633	-81.002227
470	527954	AUGUSTA	114	60	7/15/1978	SANDSTONE		DOMESTIC	40.658739	-81.001015
471	125981	AUGUSTA	60	25	5/16/1955	SAND		DOMESTIC	40.651460	-81.044805
472	126000	AUGUSTA		35	10/4/1959				40.652268	-81.043419
473	356184	AUGUSTA	99	18	8/21/1967	SHALE	18	DOMESTIC	40.649231	-81.055858
474	386887	AUGUSTA	91	20	7/21/1969	SHALE	18	DOMESTIC	40.649180	-81.055289
475	432436	AUGUSTA	90	36	7/3/1972	SHALE		DOMESTIC	40.652268	-81.043419
476	443607	AUGUSTA	65	26	9/9/1972	SANDSTONE	3	DOMESTIC	40.651057	-81.050743
477	500315	AUGUSTA	252	115	10/23/1976	SHALE		DOMESTIC	40.649180	-81.055289
478	522414	AUGUSTA	95	50	8/21/1977	SHALE		DOMESTIC	40.651886	-81.051010
479	913084	AUGUSTA	245	40	2/20/2001	SHALE	9	DOMESTIC	40.651530	-81.062600
480	987611	AUGUSTA	90	29	9/2/2005		2	DOMESTIC	40.649330	-81.054000
481	820052	AUGUSTA	93	28	10/5/1995	SHALE		DOMESTIC	40.650170	-81.054547
482	911677	AUGUSTA	95	35	11/7/2000	SANDSTONE & SHALE	3	DOMESTIC	40.651690	-81.049450
483	534173	AUGUSTA	200	130	8/22/1979	SHALE	1	DOMESTIC	40.652090	-81.049923
484	612618	AUGUSTA	291	117	9/13/1983	SHALE	4	DOMESTIC	40.652294	-81.048892
485	766995	AUGUSTA	117	44	10/4/1993	SHALE			40.651793	-81.045100
486	671538	AUGUSTA	113	39	5/9/1988	ROCK			40.652375	-81.043928
487	803435	AUGUSTA	156	160	5/20/1995	SHALE	11	DOMESTIC	40.652199	-81.031738
488	930566	AUGUSTA	204	128	8/31/2001	SHALE		DOMESTIC	40.652170	-81.060330
489	3010629	AUGUSTA	175		9/19/2023	SANDSTONE	174	DOMESTIC	40.701737	-81.075647
490	273715	AUGUSTA	202	150		SHALE			40.685373	-81.021476
491	336353	AUGUSTA	60	18	4/13/1966	SHALE	12		40.700742	-80.999552
492	435215	AUGUSTA	67	35	8/3/1972	SANDSTONE	20	DOMESTIC	40.684150	-81.001639
493	435216	AUGUSTA	91	55	8/5/1972	SANDSTONE	31	DOMESTIC	40.684150	-81.001639
494	516360	AUGUSTA	131	75	5/28/1977	SHALE	48	DOMESTIC	40.692403	-81.001338
495	671879	AUGUSTA	85	45	10/3/1989	SANDSTONE		DOMESTIC	40.684425	-81.002129
496	516363	AUGUSTA	181	60	6/18/1977	SHALE	12	DOMESTIC	40.687096	-81.000945
497	671504	AUGUSTA	182	95	10/10/1987	SHALE	2	DOMESTIC	40.687610	-81.001118
498	942252	AUGUSTA	75	18	2/19/2002	SHALE	2	AGRIC/IRRIG	40.690020	-81.000580
499	527970	AUGUSTA	78	40	10/19/1978	SHALE	8	DOMESTIC	40.689110	-81.002097

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500	747199	AUGUSTA	149	95	11/21/1992	SHALE		DOMESTIC	40.692037	-80.997631
501	2080493	AUGUSTA	80	3	7/3/2020	SANDSTONE	11	DOMESTIC	40.695000	-81.001100
502	898280	AUGUSTA	61	5	12/30/1999	SHALE	30	HEATING/COOLING	40.700550	-80.999849
503	2050749	AUGUSTA	62	16	12/22/2014	SHALE		DOMESTIC	40.703000	-80.998500
504	428581	AUGUSTA	50		11/1/1971	SANDSTONE			40.702834	-80.996709
505	883337	AUGUSTA	151	44	1/12/2000	SHALE		DOMESTIC	40.682670	-81.020500
506	938177	AUGUSTA	120	42	2/19/2002	SHALE	18	DOMESTIC	40.682310	-80.994360
507	891157	AUGUSTA	74	14	11/21/2000	SANDSTONE		DOMESTIC	40.647522	-81.028320
508	930222	AUGUSTA	119	16	12/22/2001	OLD WELL		DOMESTIC	40.651740	-81.027050
509	598755	AUGUSTA	60	15	5/12/1981	SHALE	8	DOMESTIC	40.649457	-81.025856
510	141911	AUGUSTA	70	12	12/2/1954	SHALE	27	DOMESTIC	40.652357	-81.012291
511	541400	AUGUSTA	74	25	6/14/1978	GRAVEL		DOMESTIC	40.579589	-81.089752
512	493456	AUGUSTA	110		1/13/1976	SANDSTONE	4	DOMESTIC	40.579589	-81.089752
513	26143	BROWN	40	10	4/8/1948	SHALE		DOMESTIC	40.659901	-81.120343
514	49909	BROWN	415	38	4/10/1949	SANDSTONE	10		40.703773	-81.115227
515	213516	BROWN	50		10/23/1958	SHALE	30	DOMESTIC	40.671330	-81.141419
516	325609	BROWN	72	18	9/9/1966	SAND	30	DOMESTIC	40.693837	-81.088366
517	356199	BROWN	81	28	10/13/1967	COAL	45	DOMESTIC	40.693837	-81.088366
518	468486	BROWN	73	47	8/28/1974	SANDSTONE	9	DOMESTIC	40.699737	-81.090153
519	367389	BROWN	73	16	9/27/1967	COAL		DOMESTIC	40.678196	-81.109344
520	17858	BROWN	43	8		SANDSTONE		DOMESTIC	40.665146	-81.131841
521	117852	BROWN	30	1		SHALE	24		40.664963	-81.132873
522	117853	BROWN	40	1		SHALE	25	DOMESTIC	40.666350	-81.134257
523	117854	BROWN	50			SHALE	30	DOMESTIC	40.667222	-81.136252
524	117859	BROWN	60	6		SHALE	54		40.662771	-81.129749
525	149567	BROWN	74		5/14/1955	SANDSTONE	67	DOMESTIC	40.666080	-81.133535
526	236233	BROWN	60		12/30/1960	GRAVEL & SAND			40.656105	-81.124962
527	279585	BROWN	297	76	9/25/1962	SANDSTONE		PUBLIC/SEMI-PUB	40.650051	-81.122509
528	286502	BROWN	90		8/18/1962	SHALE	35	DOMESTIC	40.666804	-81.134940
529	286506	BROWN	97	15	8/28/1962	SANDSTONE	56	DOMESTIC	40.666087	-81.135429
530	372011	BROWN	61		4/22/1968	SHALE	4	DOMESTIC	40.670123	-81.140649
531	411984	BROWN	35	10	4/30/1971	SAND & GRAVEL		DOMESTIC	40.667026	-81.137742
532	424373	BROWN	86		9/17/1971	GRAVEL		DOMESTIC	40.668285	-81.138210
533	424381	BROWN	82		9/29/1971	SANDSTONE	75	DOMESTIC	40.667910	-81.137062
534	443623	BROWN	90	5	10/26/1972	SAND		DOMESTIC	40.667792	-81.137704
535	450568	BROWN	75	2	7/10/1973	SHALE	38	PUBLIC/SEMI-PUB	40.665383	-81.132095

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536	455410	BROWN	112	50	6/11/1973	SHALE	4		40.660975	-81.131489
537	455433	BROWN	53	25	8/22/1973	SAND		DOMESTIC	40.665169	-81.133632
538	464162	BROWN	110	70	2/22/1974	SHALE		DOMESTIC	40.660509	-81.130682
539	464214	BROWN	75		1/22/1974	SHALE	4	DOMESTIC	40.657496	-81.126116
540	481080	BROWN	135	33	10/18/1975	SHALE	13	DOMESTIC	40.659655	-81.130287
541	522652	BROWN	140		7/28/1977	COAL	117	DOMESTIC	40.668611	-81.139132
542	534156	BROWN	250	158	11/6/1978	LIMESTONE		DOMESTIC	40.665146	-81.131734
543	632615	BROWN	156	67	7/21/1986	SHALE			40.674459	-81.145841
544	766971	BROWN	193	12	6/21/1993	SHALE	30	DOMESTIC	40.713531	-81.088370
545	598787	BROWN	87	35	4/22/1983	SHALE	14	DOMESTIC	40.715725	-81.092467
546	839454	BROWN	198	67	11/28/1996	SHALE		DOMESTIC	40.715770	-81.092482
547	202550	BROWN	69	36	10/14/1958	SANDSTONE			40.647855	-81.105878
548	225532	BROWN	178	6	7/27/1959	SHALE	169	DOMESTIC	40.700708	-81.106525
549	225536	BROWN	125	55	8/20/1959	SANDSTONE			40.693844	-81.101399
550	231353	BROWN	69	36	2/20/1959	SANDSTONE			40.647855	-81.105878
551	237856	BROWN	347	160	11/6/1959	SHALE			40.659012	-81.108128
552	276502	BROWN	33	3	2/22/1962	SHALE	28	DOMESTIC	40.664215	-81.108656
553	276554	BROWN	58	22	5/13/1963	SHALE	22	DOMESTIC	40.710251	-81.104815
554	276575	BROWN	106	30	9/11/1963	SANDSTONE	38	DOMESTIC	40.710736	-81.109320
555	420821	BROWN	61	32	9/27/1971	COAL	23		40.708758	-81.104230
556	424400	BROWN	49	26	11/18/1971	SHALE	5		40.682715	-81.106168
557	432423	BROWN	148	65	5/15/1972	SHALE	4	DOMESTIC	40.698277	-81.104402
558	443620	BROWN	173	8	10/18/1972	SAND		DOMESTIC	40.713548	-81.101083
559	477481	BROWN	54	17	2/13/1976	SHALE	40	DOMESTIC	40.709539	-81.104111
560	493705	BROWN	158	93	5/27/1976	SANDSTONE	4	DOMESTIC	40.698416	-81.115851
561	520522	BROWN	120	50	7/6/1977	SHALE	20		40.711215	-81.105231
562	527278	BROWN	145	60	2/28/1978	SHALE		DOMESTIC	40.649314	-81.107746
563	642383	BROWN	90	60	6/25/1988	SANDSTONE			40.654134	-81.107802
564	891135	BROWN	350	124.5	5/11/2000	SAND & ROCK	1	DOMESTIC	40.699090	-81.105420
565	516284	BROWN	418	190	4/27/1978	SANDSTONE		DOMESTIC	40.657587	-81.105633
566	935354	BROWN	319	108	8/6/2001	SANDSTONE	9	DOMESTIC	40.660311	-81.104726
567	888785	BROWN	300	152	5/6/1999	SHALE		DOMESTIC	40.710980	-81.103390
568	1021459	BROWN	364	149	5/18/2023	SANDSTONE		DOMESTIC	40.661247	-81.108889
569	495200	BROWN	91	30	3/14/1977	COAL	8	DOMESTIC	40.670764	-81.107827
570	464192	BROWN	93	53	8/1/1974	SHALE			40.673282	-81.107187
571	975161	BROWN	100	24	1/6/2004	SHALE	1	DOMESTIC	40.673170	-81.107430

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572	804160	BROWN	81	24	7/6/1995	SHALE	12	DOMESTIC	40.674478	-81.107854
573	705378	BROWN	80	12		SANDSTONE	25	DOMESTIC	40.679460	-81.111078
574	955630	BROWN	175	104	11/15/2005	SHALE	1	DOMESTIC	40.685000	-81.102667
575	992630	BROWN	305	75	5/19/2008	SHALE	4		40.712980	-81.101580
576	702368	BROWN	263	95	10/31/1989	SHALE	30	DOMESTIC	40.688167	-81.100897
577	799279	BROWN	57	20	8/9/1994	SHALE	14	AGRIC/IRRIG	40.688160	-81.100886
578	934596	BROWN	135	100	11/20/2003	SHALE	20	DOMESTIC	40.713200	-81.101790
579	718760	BROWN	82	35	8/19/1991	SHALE	46	DOMESTIC	40.694296	-81.098568
580	541057	BROWN	39	16.5	3/23/1979	SHALE	33	DOMESTIC	40.701642	-81.103329
581	930571	BROWN	50	17	11/18/2001	SHALE	1	DOMESTIC	40.706100	-81.103280
582	721461	BROWN	130	68	7/31/1991	SANDSTONE		DOMESTIC	40.705954	-81.104519
583	747197	BROWN	290	40	10/23/1992	SANDSTONE	16	DOMESTIC	40.709706	-81.104141
584	913043	BROWN	60	20	9/12/2000	SHALE	35	DOMESTIC	40.711570	-81.108270
585	1002457	BROWN	203	18	7/11/2007	LIMESTONE	180	DOMESTIC	40.715000	-81.102500
586	820061	BROWN	199	30	11/20/1995	CLAY & SHALE		DOMESTIC	40.715048	-81.101577
587	967701	BROWN	144	15	8/12/2004	SHALE	120	DOMESTIC	40.669670	-81.122000
588	902220	BROWN	125	25	1/24/2000	SANDSTONE	9	DOMESTIC	40.646730	-81.145110
589	173351	BROWN	95		12/5/1955	SHALE	60	DOMESTIC	40.670611	-81.127574
590	202458	BROWN	48		8/1/1957	SHALE	40		40.659690	-81.145083
591	237840	BROWN	45	6	10/19/1961	SHALE	21	DOMESTIC	40.667585	-81.108172
592	276506	BROWN	91		5/19/1961	SANDSTONE	87		40.668393	-81.109017
593	387896	BROWN	48	12	8/28/1969	COAL	3	DOMESTIC	40.666304	-81.103904
594	411988	BROWN	63		6/4/1971	SHALE	30	DOMESTIC	40.669338	-81.117779
595	411993	BROWN	102	10	6/17/1971	SHALE		DOMESTIC	40.671004	-81.127887
596	424390	BROWN	45	10	10/29/1971	SAND		DOMESTIC	40.656624	-81.142558
597	424396	BROWN	54	25.5	11/6/1991	SHALE	18	DOMESTIC	40.669238	-81.114726
598	455401	BROWN	53	10	4/30/1973	SHALE	25	DOMESTIC	40.669655	-81.112329
599	455402	BROWN	62	2	5/3/1973	SHALE	40	DOMESTIC	40.659234	-81.143763
600	455412	BROWN	62	3	6/14/1973	SHALE	55	DOMESTIC	40.669514	-81.120624
601	455423	BROWN	74	10	7/16/1973	SHALE		DOMESTIC	40.669514	-81.120624
602	522431	BROWN	180	8	12/30/1977	SHALE		DOMESTIC	40.669849	-81.136093
603	522657	BROWN	120		10/17/1977	SHALE	114	DOMESTIC	40.669849	-81.136093
604	522387	BROWN	305	120	9/13/1978	SAND	6	DOMESTIC	40.670437	-81.095749
605	550282	BROWN	156	100	7/30/1980	SHALE	39	DOMESTIC	40.667385	-81.100333
606	530847	BROWN	100	20	3/3/1978	SHALE	80		40.668747	-81.114448
607	563407	BROWN	130	15	8/28/1979	SHALE	20		40.668908	-81.118634

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
608	701262	BROWN	35	3	5/18/1990	SANDSTONE	30		40.669646	-81.120577
609	699844	BROWN	90	3	5/6/1991	SAND & GRAVEL		DOMESTIC	40.669310	-81.122599
610	699843	BROWN	89	60	5/2/1991	SHALE	14	DOMESTIC	40.668144	-81.123676
611	1021442	BROWN	106	24	7/14/2021	SHALE	35	DOMESTIC	40.669230	-81.126038
612	799318	BROWN	77		5/9/1995	SANDSTONE	55	DOMESTIC	40.670566	-81.130520
613	1021452	BROWN	126	19	9/29/2022	SHALE	55	DOMESTIC	40.670789	-81.128067
614	708594	BROWN	79	26	4/5/1990	SHALE		DOMESTIC	40.666830	-81.143195
615	679136	BROWN	134	59	11/4/1988	SHALE	12	DOMESTIC	40.663975	-81.145113
616	747207	BROWN	87	15	7/19/1993	SHALE	44	DOMESTIC	40.660637	-81.145908
617	501545	BROWN	215	75	7/12/1976	SHALE	10	DOMESTIC	40.719026	-81.038988
618	642209	BROWN	108	36	10/19/1984	COAL		DOMESTIC	40.658657	-81.144167
619	875645	BROWN	175	40	1/17/1999	SHALE		DOMESTIC	40.648540	-81.145070
620	849755	BROWN	90	35	5/21/1999	SHALE	60	DOMESTIC	40.646470	-81.145170
621	914392	BROWN	41	7	3/2/2001	SAND		DOMESTIC	40.646390	-81.145190
622	598794	BROWN	80	37	9/3/1983	SANDSTONE		DOMESTIC	40.649075	-81.148832
623	1020166	BROWN	206	75	9/16/2019	SHALE	45	DOMESTIC	40.647879	-81.154091
624	400707	BROWN	75	18	10/24/1969	SHALE	68	PUBLIC/SEMI-PUB	40.681124	-81.123411
625	829666	BROWN	125		7/26/1996	SHALE	17	DOMESTIC	40.654324	-81.129600
626	772457	BROWN	90	2	8/15/1993	SHALE	50		40.657737	-81.126134
627	795212	BROWN	103	5	10/1/1994	SHALE			40.657720	-81.126112
628	2055915	BROWN	70	8	2/8/2016	SANDSTONE		DOMESTIC	40.657667	-81.127333
629	2079661	BROWN	105	20	4/30/2020	SHALE	48	DOMESTIC	40.661650	-81.129219
630	499983	BROWN	265	50	7/13/1977	SANDSTONE		INDUSTRIAL	40.663607	-81.131584
631	891167	BROWN	275	40.5	5/25/2001	SANDSTONE & SHALE	4	DOMESTIC	40.667160	-81.137350
632	2044611	BROWN	90	2	9/19/2013	SANDSTONE	28	AGRIC/IRRIG	40.666017	-81.134300
633	1002451	BROWN	63	15	4/5/2007	SHALE	23	DOMESTIC	40.665833	-81.133333
634	492827	BROWN	70	20	6/22/1976	SANDSTONE	23	DOMESTIC	40.665673	-81.135046
635	1016780	BROWN	230	6	3/22/2013			DOMESTIC	40.669967	-81.140867
636	862605	BROWN	312	123	10/9/1997	SANDSTONE		DOMESTIC	40.668133	-81.146932
637	601530	BROWN	132	41	5/15/1982	SHALE	4	DOMESTIC	40.673823	-81.145255
638	671858	BROWN	77	25	8/17/1988	SHALE	6	DOMESTIC	40.675470	-81.143367
639	455435	BROWN	42	10	8/23/1973	SANDSTONE	40	DOMESTIC	40.667497	-81.136309
640	138292	BROWN	45	10	8/6/1954	SANDSTONE	20	DOMESTIC	40.685730	-81.133199
641	138293	BROWN	40	18	8/6/1954	SANDSTONE	20	DOMESTIC	40.685608	-81.133973
642	913042	BROWN	150	105	9/22/2000	SHALE		DOMESTIC	40.680590	-81.126320
643	905748	BROWN	235	95	3/23/2001	SANDSTONE		DOMESTIC	40.684000	-81.131000

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
644	411975	BROWN	104	50	4/3/1970	SHALE & SANDSTONE	65	DOMESTIC	40.685289	-81.131556
645	611850	BROWN	156		9/15/1984	SHALE			40.691540	-81.131820
646	938932	BROWN	240	125	9/6/2002	SHALE	7	DOMESTIC	40.690350	-81.135050
647	909958	BROWN	130	90	6/24/2000	LIMESTONE	2	DOMESTIC	40.685650	-81.131680
648	2069520	BROWN	136	44	7/30/2018	SHALE		DOMESTIC	40.691181	-81.132456
649	2074028	BROWN	150	53	2/21/2019	SHALE		DOMESTIC	40.691247	-81.128944
650	2047232	BROWN	120	56	4/22/2014	SANDSTONE	12	DOMESTIC	40.691800	-81.131033
651	608820	BROWN	150	84	5/31/1983	COAL	3		40.692369	-81.130853
652	296785	BROWN	39	16	10/22/1964	SANDSTONE		DOMESTIC	40.672776	-81.122195
653	455413	BROWN	50	18	6/15/1973	SHALE	4	DOMESTIC	40.664081	-81.118508
654	1019105	BROWN	75	11	5/5/2016	SHALE		DOMESTIC	40.663783	-81.123417
655	687854	BROWN	75		10/9/1988	SHALE	62		40.665689	-81.119679
656	608816	BROWN	68	17	4/11/1983	SHALE	7	DOMESTIC	40.672776	-81.122195
657	770073	BROWN	261	155	6/3/1994	SHALE	2	DOMESTIC	40.677481	-81.124147
658	770072	BROWN	256	134	5/24/1994	SHALE	3	DOMESTIC	40.677493	-81.125846
659	829732	BROWN	106		6/3/1996				40.677899	-81.119867
660	643649	BROWN	207	103	10/15/1985	SHALE		DOMESTIC	40.679572	-81.124496
661	52695	BROWN	90		11/8/1949	SHALE	20		40.689190	-81.095811
662	160556	BROWN	56	21	10/16/1955	SHALE		DOMESTIC	40.674174	-81.130798
663	173387	BROWN	126		11/6/1956	SANDSTONE	22	DOMESTIC	40.685480	-81.122181
664	387874	BROWN	44	12	4/29/1969	SAND	5	DOMESTIC	40.673598	-81.131706
665	392356	BROWN	75	8	4/10/1969	SANDSTONE	44		40.685411	-81.122090
666	411968	BROWN	115	15	11/3/1970	SHALE	80		40.685411	-81.122090
667	481082	BROWN	231	150	11/1/1975	SHALE		DOMESTIC	40.688345	-81.100980
668	534314	BROWN	75	32	10/27/1978	SHALE	50	DOMESTIC	40.673660	-81.130322
669	481096	BROWN	205	55	4/22/1976	SHALE			40.689409	-81.096849
670	534188	BROWN	112	30	5/9/1980	SHALE		DOMESTIC	40.689674	-81.096099
671	534819	BROWN	225	76	5/6/1980	SHALE			40.689409	-81.096849
672	978963	BROWN	280		8/4/2004	CLAY & SHALE		DOMESTIC	40.686600	-81.100400
673	963542	BROWN	305	100	4/17/2006		1	DOMESTIC	40.688881	-81.103831
674	969577	BROWN	260	100	12/11/2003	SHALE	4	DOMESTIC	40.686820	-81.104580
675	1008208	BROWN	240	169	10/31/2007			DOMESTIC	40.687000	-81.105500
676	1012490	BROWN	240	153	4/28/2010	SANDSTONE & SHALE	3	DOMESTIC	40.685260	-81.106040
677	923071	BROWN	220	100	12/11/2000	SANDSTONE	11	DOMESTIC	40.688229	-81.105988
678	909955	BROWN	196	163	5/25/2000	SANDSTONE	1	DOMESTIC	40.685854	-81.106717
679	969578	BROWN	220		12/11/2003	SANDSTONE	4	DOMESTIC	40.688170	-81.106700

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680	963512	BROWN	280	90	3/15/2004	SHALE	8	DOMESTIC	40.681582	-81.119516
681	971681	BROWN	182	55	12/1/2003	SANDSTONE & SHALE	6	DOMESTIC	40.680880	-81.122850
682	3008931	BROWN	85	21	6/19/2023	SANDSTONE	41	DOMESTIC	40.680000	-81.122580
683	902244	BROWN	100	27	6/12/2000	SHALE	20	DOMESTIC	40.675470	-81.129320
684	2063946	BROWN	140	40	8/23/2017	SANDSTONE	2	DOMESTIC	40.677910	-81.127220
685	654402	BROWN	62	4	10/28/1986	SHALE	24	DOMESTIC	40.671344	-81.133920
686	799290	BROWN	80	6	9/29/1994	SANDSTONE	60	DOMESTIC	40.676857	-81.128626
687	799302	BROWN	114	6	12/12/1994	SANDSTONE	60	DOMESTIC	40.677185	-81.128271
688	679137	BROWN	71	23	11/4/1988	COAL	10	DOMESTIC	40.677102	-81.128148
689	578660	BROWN	65	22	10/13/1981	SHALE	4	DOMESTIC	40.675755	-81.133230
690	659085	BROWN	137	78	7/13/1987	COAL		DOMESTIC	40.676468	-81.135012
691	573707	BROWN	70	13	9/27/1980	SHALE		DOMESTIC	40.672612	-81.133419
692	679148	BROWN	85	13	1/1/1989	SHALE	48	DOMESTIC	40.676635	-81.128356
693	799323	BROWN	133	19	6/2/1995	SHALE	30	DOMESTIC	40.673840	-81.130156
694	2051837	BROWN	80	25	5/1/2015	SHALE	2	DOMESTIC	40.683340	-81.096090
695	948637	BROWN	380	136	10/11/2002	SANDSTONE	3	DOMESTIC	40.686394	-81.098036
696	89746	BROWN	140	108	1/12/1953	SANDSTONE		DOMESTIC	40.700920	-81.121304
697	138357	BROWN	166	106	8/10/1954	SHALE	41	DOMESTIC	40.703913	-81.117813
698	200239	BROWN	165	100	7/11/1957	SHALE			40.703610	-81.111649
699	405233	BROWN	175	142	11/28/1970	SHALE		DOMESTIC	40.703788	-81.117765
700	443603	BROWN	223	180	9/2/1972	SHALE		DOMESTIC	40.702119	-81.117183
701	445191	BROWN	250	68	12/12/1972	SHALE			40.703077	-81.115571
702	471669	BROWN	240		5/17/1994	SHALE		DOMESTIC	40.705271	-81.117477
703	471683	BROWN	240	50	6/11/1974	SHALE		DOMESTIC	40.705271	-81.117477
704	1002075	BROWN	133		3/2/2007	SANDSTONE	5	DOMESTIC	40.700020	-81.117950
705	955625	BROWN	260	170	7/24/2006	SHALE		DOMESTIC	40.703611	-81.117500
706	975158	BROWN	325	163	5/25/2004	SHALE	5	DOMESTIC	40.703830	-81.117450
707	701275	BROWN	75	35	8/29/1990	SANDSTONE	12		40.706359	-81.117796
708	642377	BROWN	204	140	8/19/1987	SHALE			40.705271	-81.117477
709	315076	BROWN	90	37	11/7/1964	SHALE	5		40.697535	-81.117384
710	464195	BROWN	138	89	8/20/1974	SHALE	4		40.697930	-81.108004
711	464201	BROWN	146	82	9/14/1973	SHALE		DOMESTIC	40.697756	-81.105825
712	635634	BROWN	174	93	8/16/1986	LIMESTONE		DOMESTIC	40.697756	-81.105825
713	744851	BROWN	144	119	3/29/1992	SANDSTONE	3	DOMESTIC	40.696877	-81.110371
714	799304	BROWN	191	116	1/13/1995	LIMESTONE		DOMESTIC	40.696882	-81.110388
715	2018414	BROWN	200	40	8/20/2008	SANDSTONE	21	DOMESTIC	40.699167	-81.103056

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716	601538	BROWN	177	94	8/25/1982	SHALE		DOMESTIC	40.698484	-81.113384
717	987254	BROWN	413	132	11/11/2005	SAND & ROCK		DOMESTIC	40.698770	-81.117500
718	2072436	BROWN	259	143	3/7/2019	SHALE		DOMESTIC	40.691333	-81.109333
719	612609	BROWN	170	86	7/18/1983	SHALE	26	DOMESTIC	40.698416	-81.115851
720	839460	BROWN	193	92	3/13/1997	CLAY & SHALE		DOMESTIC	40.698807	-81.116564
721	2072443	BROWN	398	100	3/7/2019	SHALE & SANDSTONE		DOMESTIC	40.690833	-81.119833
722	1002450	BROWN	105	34	3/8/2007	SHALE	4	DOMESTIC	40.699833	-81.121500
723	938182	BROWN	195	80	9/26/2002	OLD WELL		DOMESTIC	40.699940	-81.126730
724	2011135	BROWN	158	90	6/25/2007	SANDSTONE		DOMESTIC	40.698167	-81.127500
725	642367	BROWN	165	100	8/12/1986	SHALE			40.695934	-81.103116
726	938179	BROWN	135	41	8/3/2002	EXISTING WELL		DOMESTIC	40.689610	-81.111400
727	764538	BROWN	150	38	3/10/1994	SANDSTONE	8	DOMESTIC	40.653192	-81.105554
728	839461	BROWN	209	73	3/15/1997	SHALE	3	DOMESTIC	40.692186	-81.106075
729	738024	BROWN	100	24	10/21/1991	SANDSTONE		DOMESTIC	40.689890	-81.107947
730	772472	BROWN	130	80	2/6/1994	SANDSTONE		INDUSTRIAL	40.690727	-81.108570
731	3001778	BROWN	160	53	7/5/2022	SHALE		DOMESTIC	40.691944	-81.109167
732	799316	BROWN	132	69.5	4/26/1995	SHALE	2	DOMESTIC	40.690177	-81.109326
733	901802	BROWN	103	65	10/30/1999	SHALE	1	DOMESTIC	40.689500	-81.111520
734	901850	BROWN	103	65	10/10/1999	SHALE	1	DOMESTIC	40.689500	-81.111520
735	752283	BROWN	62	20	5/28/1992	SANDSTONE	12	DOMESTIC	40.690715	-81.110512
736	160117	BROWN	45	8	7/13/1956	MUD		DOMESTIC	40.652964	-81.104615
737	411992	BROWN	55	30	6/16/1971	SAND	10	DOMESTIC	40.652834	-81.105186
738	839450	BROWN	122	78	11/2/1996	SANDSTONE		DOMESTIC	40.653192	-81.105554
739	2018975	BROWN	175	134	10/1/2008	SANDSTONE	9	DOMESTIC	40.648830	-81.095440
740	642222	BROWN	242	89	4/3/1985	SHALE		DOMESTIC	40.649419	-81.095459
741	924895	BROWN	395	90	6/5/2002	SANDSTONE		DOMESTIC	40.652980	-81.105770
742	641766	BROWN	88	1	1/4/1984	SHALE	10	DOMESTIC	40.652929	-81.107547
743	799294	BROWN	222	38	10/28/1994	SHALE	25	DOMESTIC	40.653069	-81.104658
744	370079	BROWN	156	65	8/11/1979	SHALE	140	DOMESTIC	40.654205	-81.106406
745	231395	BROWN	64	43	9/9/1959	SANDSTONE	8		40.656418	-81.093537
746	971616	BROWN	238	52	5/26/2005		8	DOMESTIC	40.657330	-81.094170
747	716327	BROWN	315	97	11/9/1991	SHALE		DOMESTIC	40.666107	-81.094342
748	3016084	BROWN	320	160	7/8/2024	SHALE		DOMESTIC	40.661240	-81.095350
749	931778	BROWN	120	41	5/25/2001	SANDSTONE	27	DOMESTIC	40.662889	-81.096506
750	534155	BROWN	72	24	10/3/1978	SHALE	4	DOMESTIC	40.662310	-81.096858
751	699836	BROWN	130	42	7/21/1990	SHALE	19	DOMESTIC	40.662601	-81.097526

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752	955609	BROWN	125	30	3/18/2003			DOMESTIC	40.649200	-81.093327
753	839447	BROWN	143	64	10/18/1996	SHALE		DOMESTIC	40.650705	-81.089842
754	481081	BROWN	186	128	10/25/1975	SHALE	3	DOMESTIC	40.678634	-81.090788
755	624952	BROWN	148	114	6/9/1986	SHALE			40.681308	-81.091912
756	671517	BROWN	85	18	11/25/1987	SHALE		DOMESTIC	40.682621	-81.089976
757	500320	BROWN	173		11/17/1976	SHALE	4	DOMESTIC	40.691699	-81.088694
758	534200	BROWN	183	95	8/21/1980	SHALE		DOMESTIC	40.691699	-81.088694
759	701265	BROWN	142		6/11/1990	COAL			40.697957	-81.088481
760	877432	BROWN	150	46	6/18/1998	SANDSTONE		DOMESTIC	40.695530	-81.088010
761	957280	BROWN	246	120	10/2/2003	SHALE		DOMESTIC	40.698866	-81.092000
762	850926	BROWN	180	113	4/29/1997	SHALE	16	DOMESTIC	40.703483	-81.085981
763	868804	BROWN	120	40	11/21/1997	SANDSTONE	8	DOMESTIC	40.695950	-81.088020
764	481053	BROWN	171	120	1/8/1975	COAL		DOMESTIC	40.697130	-81.089669
765	613649	BROWN	171	125	6/29/1988	CLEANOUT			40.702444	-81.089413
766	805686	BROWN	120	50	11/18/1994	SHALE	40	DOMESTIC	40.701656	-81.088450
767	510319	BROWN	90	55	11/15/1976	SHALE	30		40.702655	-81.088217
768	716264	BROWN	134		5/1/1991	SHALE	36	DOMESTIC	40.714585	-81.091073
769	237871	BROWN	95	5	5/2/1960	SHALE	75		40.714034	-81.093687
770	1008061	BROWN	380	175	10/15/2008		12	DOMESTIC	40.660573	-81.134833
771	862638	BROWN	108	80	1/28/1998	LIMESTONE	12	DOMESTIC	40.579589	-81.089752
772	534174	BROWN	79	34	8/22/1979	SHALE	2	DOMESTIC	40.649022	-81.090040
773	888925	BROWN	100	40	2/25/1999	SANDSTONE	14	DOMESTIC	40.647236	-81.090199
774	3001459	BROWN	180	29	7/2/2021	SANDSTONE	23	DOMESTIC	40.703920	-81.094980
775	932897	BROWN	49	12	9/7/2002	SAND & GRAVEL		DOMESTIC	40.579589	-81.089752
776	2052112	BROWN	36	9	2/16/2015	SAND & GRAVEL		DOMESTIC	40.709500	-81.109333
777	932483	BROWN	235	130	7/3/2002	CLAY & SHALE		DOMESTIC	40.648000	-81.100670
778	928798	BROWN	240	140	7/12/2001	SANDSTONE		DOMESTIC	40.647870	-81.101250
779	3007298	BROWN	200	69	3/24/2023	SHALE		DOMESTIC	40.648010	-81.103460
780	2083045	BROWN	189	82	10/2/2020	SANDSTONE		DOMESTIC	40.698881	-81.092158
781	802809	BROWN	100	41	6/26/1995	SHALE	8	DOMESTIC	40.650800	-81.127527
782	955642	BROWN	67	19	10/30/2004		18	DOMESTIC	40.651930	-81.130450
783	1006566	BROWN	75	11	8/7/2007	SHALE	27	DOMESTIC	40.654833	-81.125000
784	649819	BROWN	160	70	12/17/1984	SHALE			40.618487	-81.135251
785	52669	CENTER	76		4/20/1949	SAND	25		40.590703	-81.101938
786	52671	CENTER	97		6/7/1949	SHALE	38		40.580221	-81.100604
787	85609	CENTER	116	70	1/1/1951	SHALE		DOMESTIC	40.591977	-81.091759

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
788	89160	CENTER	186	160	8/13/1951	SHALE	20	DOMESTIC	40.566557	-81.072677
789	89165	CENTER	45	25	9/29/1951	SHALE	20	DOMESTIC	40.563135	-81.067539
790	89176	CENTER	108	40	1/1/1951	SAND	12	DOMESTIC	40.560916	-81.062468
791	160572	EAST	238	110	6/30/1956	SAND		DOMESTIC	40.669190	-80.967204
792	289165	EAST	400	30	8/12/1963	SANDSTONE	5		40.677704	-80.984598
793	379778	EAST	128	68		SHALE		DOMESTIC	40.665601	-80.949007
794	473174	EAST	100	60	5/14/1975	SHALE	20	DOMESTIC	40.676989	-80.978224
795	186930	EAST	115	110	4/19/1957	SAND		DOMESTIC	40.652551	-80.983737
796	896027	EAST	70	50	11/15/2000	SANDSTONE	3	DOMESTIC	40.644690	-80.936770
797	1006547	EAST	200	113	9/22/2010	SHALE & SANDSTONE	113	DOMESTIC	40.653000	-80.942222
798	339912	CENTER	60	25	10/6/1965	SHALE	45		40.587280	-81.089804
799	353834	CENTER	185	140		SANDSTONE		DOMESTIC	40.587280	-81.089804
800	370059	CENTER	238	165		SHALE	35	DOMESTIC	40.560591	-81.078122
801	491603	CENTER	168	125	10/11/1975	SANDSTONE	10	DOMESTIC	40.585673	-81.105070
802	737009	CENTER	112		10/29/1991	SANDSTONE	39	DOMESTIC	40.590374	-81.091253
803	141905	CENTER	54	18	10/20/1954	SHALE	34	DOMESTIC	40.588677	-81.088449
804	160135	CENTER	82	40	12/8/1956	SHALE	12	DOMESTIC	40.589622	-81.090324
805	160565	CENTER	64	35	12/26/1955	SAND	43	DOMESTIC	40.589666	-81.088514
806	184963	CENTER	120	75	6/30/1956	SHALE	55	DOMESTIC	40.589684	-81.090333
807	296859	CENTER	208	140		SANDSTONE	45	DOMESTIC	40.589707	-81.089398
808	387863	CENTER	89	49	1/28/1969	SHALE	4	DOMESTIC	40.590811	-81.082605
809	390939	CENTER	108	30	12/12/1970	SHALE	3	DOMESTIC	40.590811	-81.082605
810	427289	CENTER	170	85	1/11/1974	SANDSTONE		DOMESTIC	40.591240	-81.083290
811	473155	CENTER	183	90	7/16/1974	SANDSTONE	35	DOMESTIC	40.590310	-81.083510
812	522406	CENTER	166	81	7/6/1977	SANDSTONE		DOMESTIC	40.590811	-81.082605
813	875630	CENTER	169	95	9/25/1998			DOMESTIC	40.588800	-81.082360
814	429273	CENTER	60	45	6/20/1972	SHALE		DOMESTIC	40.603476	-81.107837
815	273707	CENTER	60	30		SHALE	30	DOMESTIC	40.601515	-81.061941
816	390940	CENTER	101	21	1/5/1970	SHALE	7	DOMESTIC	40.583183	-81.110495
817	2030377	CENTER	20		11/4/2010	SHALE	10	MONITOR	40.577967	-81.084700
818	2030378	CENTER	12	8	11/3/2010	SILT	10	MONITOR	40.577967	-81.084967
819	2030379	CENTER	20	11.2	11/3/2010	SHALE	10	MONITOR	40.577817	-81.085250
820	2030380	CENTER	12	6	11/4/2010	SILT	10	MONITOR	40.578067	-81.084867
821	2030381	CENTER	19		11/5/2010	SHALE	8	MONITOR	40.577717	-81.085200
822	427504	CENTER	120	80	10/9/1971	CLAY & SHALE			40.562547	-81.078244
823	480418	CENTER	197	40	10/10/1975	SHALE	38		40.564803	-81.072700

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
824	708592	CENTER	167	57	3/27/1990	SHALE		DOMESTIC	40.565797	-81.074173
825	679144	CENTER	258	159	12/29/1988	SHALE		DOMESTIC	40.564525	-81.073738
826	752295	CENTER	238	145	7/30/1992	SHALE		DOMESTIC	40.565012	-81.072377
827	89194	CENTER	55	25	8/30/1952	SAND			40.562406	-81.080949
828	327488	CENTER	100	50	1/9/1965	SANDSTONE		DOMESTIC	40.564235	-81.080949
829	356161	CENTER	100	60	12/20/1966	SAND		DOMESTIC	40.564235	-81.080949
830	356160	CENTER	138	65	12/16/1966	SHELL		DOMESTIC	40.562963	-81.081435
831	372026	CENTER	170	90	6/14/1968	SAND	30	DOMESTIC	40.562963	-81.081435
832	184954	CENTER	85	35	4/21/1956	SHALE	20	DOMESTIC	40.596054	-81.053673
833	239965	CENTER	65	30	6/16/1961	SAND	28	DOMESTIC	40.592669	-81.063177
834	318424	CENTER	140	45	3/2/1965	SHALE		DOMESTIC	40.585917	-81.070615
835	318431	CENTER	117	26	4/27/1965	SANDSTONE	75	DOMESTIC	40.587585	-81.067558
836	387852	CENTER	97	69	10/26/1968	SAND		DOMESTIC	40.590754	-81.060543
837	390903	CENTER	70	38	2/21/1969	SHALE	18	DOMESTIC	40.588303	-81.066896
838	390934	CENTER	61	30	10/1/1970	SHALE	8	DOMESTIC	40.590818	-81.065633
839	390936	CENTER	87	30	10/21/1970	SHALE		DOMESTIC	40.588829	-81.066755
840	420831	CENTER	201	142	10/19/1971	SHALE	2		40.595484	-81.058757
841	458323	CENTER	150	75	3/2/1974	CLAY & SHALE		DOMESTIC	40.590463	-81.070733
842	480440	CENTER	80	35	9/9/1976	SHALE	18		40.591551	-81.066135
843	626182	CENTER	59	23	10/28/1985	SANDSTONE	5	DOMESTIC	40.587174	-81.068214
844	612620	CENTER	73	25	9/26/1983	SANDSTONE	3	DOMESTIC	40.588422	-81.068533
845	2074444	CENTER	160	53	7/9/2019	SHALE	1	DOMESTIC	40.588200	-81.070300
846	858546	CENTER	149	50	4/1/1998	SHALE	10	DOMESTIC	40.592390	-81.064010
847	829723	CENTER	150	62	7/1/1997	COAL	4	DOMESTIC	40.590195	-81.069248
848	671546	CENTER	102	49	6/18/1988	SANDSTONE		DOMESTIC	40.591939	-81.064416
849	718775	CENTER	124	50	1/30/1992	SANDSTONE	3	OTHER	40.591594	-81.063153
850	622404	CENTER	96		8/22/1982	SANDSTONE		DOMESTIC	40.593206	-81.063942
851	891151	CENTER	224	78	10/3/2000	SHALE		DOMESTIC	40.593730	-81.062350
852	643603	CENTER	146	126	10/12/1984	SANDSTONE	4	DOMESTIC	40.594525	-81.061238
853	1002419	CENTER	236	167	5/22/2006	SANDSTONE	9	DOMESTIC	40.597830	-81.055830
854	1019139	CENTER	150	89	5/14/2019	SANDSTONE		DOMESTIC	40.596741	-81.059752
855	89169	CENTER	70	20	11/9/1951	SHALE		DOMESTIC	40.569620	-81.107534
856	356174	CENTER	65	16	7/11/1967	SHALE	20	DOMESTIC	40.565597	-81.110847
857	474153	CENTER	110	80	7/5/1974	SHALE	14		40.567908	-81.120225
858	491632	CENTER	148	78	7/31/1976	SHALE	42	DOMESTIC	40.570511	-81.095470
859	509478	CENTER	75	45	10/12/1977	SHALE		DOMESTIC	40.564635	-81.124518

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860	598751	CENTER	165	70	1/31/1981	SHALE	18	DOMESTIC	40.570308	-81.105484
861	952370	CENTER	250		3/11/2003	LOAM	2	DOMESTIC	40.570460	-81.094650
862	598771	CENTER	140	65	6/26/1982	SHALE	3	DOMESTIC	40.570525	-81.096583
863	858525	CENTER	195	137	10/18/1997	COAL	8	DOMESTIC	40.570260	-81.096580
864	716329	CENTER	343	135	11/13/1991	SANDSTONE	26	DOMESTIC	40.570333	-81.102637
865	716310	CENTER	89	26	8/20/1990	LIMESTONE & SHALE		DOMESTIC	40.561131	-81.126462
866	568410	CENTER	263	150	11/28/1980	SHALE	40	DOMESTIC	40.569651	-81.109199
867	858550	CENTER	267	77	4/21/1998			DOMESTIC	40.570300	-81.100100
868	659083	CENTER	318	170	7/7/1987	SHALE		DOMESTIC	40.569752	-81.113347
869	891087	CENTER	278	186	4/18/1999	OLD WELL		DOMESTIC	40.569920	-81.114950
870	679114	CENTER	125	65	9/2/1988	SHALE		DOMESTIC	40.563255	-81.125025
871	612639	CENTER	116	46	7/4/1984	SHALE		DOMESTIC	40.562751	-81.124164
872	1008253	CENTER	103	23	4/17/2009	SHALE		AGRIC/IRRIG	40.565170	-81.126000
873	913038	CENTER	265	151	8/31/2000	SANDSTONE & SHALE	2	DOMESTIC	40.570280	-81.098700
874	909969	CENTER	120	56	12/5/2000	OLD WELL		DOMESTIC	40.560000	-81.079650
875	702372	CENTER	238	165	11/28/1989	OLD WELL		DOMESTIC	40.560514	-81.078458
876	891096	CENTER	350	63	6/1/1999	SHALE		DOMESTIC	40.560807	-81.074629
877	160568	CENTER	116	58	12/21/1955	SHALE	63	DOMESTIC	40.582055	-81.024649
878	424356	CENTER	125	25	8/11/1971	SHALE		DOMESTIC	40.582448	-81.029007
879	514536	CENTER	300	125	11/6/1977	SHALE	8	DOMESTIC	40.581925	-81.025382
880	514537	CENTER	130	15	11/27/1977	SHALE	8	DOMESTIC	40.581925	-81.025382
881	932481	CENTER	215	115	5/20/2002	EXISTING WELL		DOMESTIC	40.569170	-81.026670
882	370093	CENTER	96	54	10/28/1979	SHALE	1	DOMESTIC	40.594661	-81.100727
883	530830	CENTER	85	35	1/8/1978	SHALE	10	DOMESTIC	40.594984	-81.098394
884	858912	CENTER	125	22	8/25/1997	SHALE		DOMESTIC	40.596045	-81.100205
885	726958	CENTER	120	30	6/5/1991	SANDSTONE		DOMESTIC	40.595053	-81.102629
886	1006558	CENTER	175	101	6/16/2009	SHALE	1	DOMESTIC	40.597170	-81.103670
887	963547	CENTER	355	100	7/24/2006	SHALE		DOMESTIC	40.595440	-81.097650
888	883341	CENTER	131	45	4/12/2000	SHALE	3	DOMESTIC	40.596833	-81.104833
889	932477	CENTER	80	11	6/28/2001	SHALE	10	DOMESTIC	40.595450	-81.099500
890	372050	CENTER	65	42	10/21/1968	CREVICE	40	DOMESTIC	40.601732	-81.079303
891	679102	CENTER	50	12	7/11/1988	SAND	6	DOMESTIC	40.597729	-81.078129
892	223165	CENTER	49	35		SHALE	46	DOMESTIC	40.577884	-81.122256
893	23005	CENTER	201		11/1/1948	SAND		DOMESTIC	40.592233	-81.106936
894	89158	CENTER	165	140	7/23/1951	SAND	38	DOMESTIC	40.563277	-81.067719
895	103407	CENTER	123	90	5/19/1953	SHALE	45	DOMESTIC	40.563902	-81.066218

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896	103422	CENTER	62	40	8/8/1953	SHALE	25	DOMESTIC	40.589695	-81.091176
897	103431	CENTER	200	160	10/15/1953	SAND		DOMESTIC	40.603217	-81.098480
898	103433	CENTER	81	20	11/5/1953	SHALE	10		40.597673	-81.095708
899	103450	CENTER	70	22	5/19/1965	SAND	45	DOMESTIC	40.583032	-81.091904
900	125953	CENTER	78	30	5/29/1954	SAND	40	DOMESTIC	40.588318	-81.091385
901	160113	CENTER	132	100	11/10/1955	LIMESTONE	30		40.567849	-81.072949
902	160124	CENTER	45	20		SAND		DOMESTIC	40.565830	-81.071141
903	160130	CENTER	160	70	10/9/1956	SAND	80	DOMESTIC	40.603850	-81.097630
904	173372	CENTER	186		8/2/1956	SANDSTONE	20		40.562976	-81.064219
905	186921	CENTER	104	55	1/30/1957	SHALE		DOMESTIC	40.561508	-81.065260
906	213534	CENTER	50	20	6/10/1959	SAND	15	DOMESTIC	40.571101	-81.075655
907	225527	CENTER	120	80	6/27/1959	SANDSTONE			40.599246	-81.097013
908	239970	CENTER	80	55	8/30/1961	SHALE	15	DOMESTIC	40.598888	-81.097913
909	241491	CENTER	155	50		SHALE		DOMESTIC	40.564319	-81.068649
910	255370	CENTER	191	155		SHALE	40	DOMESTIC	40.570049	-81.073911
911	273726	CENTER	80	60		SANDSTONE		DOMESTIC	40.572446	-81.077443
912	273740	CENTER	185	130	3/29/1963	SANDSTONE	48	DOMESTIC	40.567340	-81.073916
913	318402	CENTER	206	140	8/24/1964	SHALE	45	DOMESTIC	40.566489	-81.070145
914	318436	CENTER	122	90	6/16/1965	SANDSTONE	10	DOMESTIC	40.562325	-81.064867
915	370055	CENTER	158	120	9/11/1967	SANDSTONE	13	DOMESTIC	40.565451	-81.070393
916	372046	CENTER	88	64	10/12/1968	SAND		DOMESTIC	40.598888	-81.097913
917	411966	CENTER	166	114	10/13/1970	SHALE		DOMESTIC	40.603051	-81.097278
918	420814	CENTER	171	120	8/20/1971	SANDSTONE			40.568597	-81.076313
919	427296	CENTER	190	110	5/21/1974	SANDSTONE		DOMESTIC	40.569497	-81.074132
920	455441	CENTER	107	80	9/8/1973	SHALE	4	DOMESTIC	40.601729	-81.097095
921	464167	CENTER	130	80	4/3/1974	SHALE	4	DOMESTIC	40.601194	-81.098117
922	464170	CENTER	148	103	4/19/1974	SHALE	4	DOMESTIC	40.600855	-81.097094
923	473190	CENTER	147	107	8/3/1975	SANDSTONE		DOMESTIC	40.601425	-81.095965
924	474166	CENTER	98	70	1/2/1975	SANDSTONE	38	DOMESTIC	40.599222	-81.095618
925	476228	CENTER	136	95	7/2/1975	SHALE		DOMESTIC	40.561818	-81.064419
926	477469	CENTER	162	110	9/9/1975	SHALE	4	DOMESTIC	40.601124	-81.097520
927	480428	CENTER	160	110	3/5/1976	SHALE	70	DOMESTIC	40.600642	-81.095847
928	516351	CENTER	206	140	3/5/1977	SANDSTONE		DOMESTIC	40.569497	-81.074132
929	643623	CENTER	170	103	5/30/1985	SHALE		DOMESTIC	40.600855	-81.097094
930	753929	CENTER	14	9	3/15/1993	SHALE	4	TEST WELL	40.577113	-81.092541
931	473749	CENTER	105	59	8/22/1981	SHALE		DOMESTIC	40.598888	-81.097913

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932	1002428	CENTER	106	54	8/3/2006			DOMESTIC	40.599833	-81.095500
933	839125	CENTER	180	79	5/26/1998	SHALE		DOMESTIC	40.601500	-81.096430
934	766951	CENTER	162	110	2/8/1993	OLD WELL		DOMESTIC	40.601500	-81.097038
935	752289	CENTER	169	115	7/13/1992	OLD WELL		DOMESTIC	40.601734	-81.097000
936	1002418	CENTER	152	111	5/19/2006			COMMERCIAL	40.601670	-81.096000
937	635605	CENTER	209	162	4/23/1986	SHALE	2	DOMESTIC	40.602666	-81.097412
938	716294	CENTER	226	155	9/18/1991	SANDSTONE		DOMESTIC	40.603137	-81.097138
939	752304	CENTER	226	138	9/11/1992	OLD WELL		DOMESTIC	40.603145	-81.097177
940	514524	CENTER	185	130	9/10/1977	LIMESTONE	2	DOMESTIC	40.583485	-81.104461
941	427535	CENTER	75	20	12/24/1972	CLAY & SHALE		DOMESTIC	40.568518	-81.122963
942	522357	CENTER	74	21	5/1/1978	SHALE	3		40.567631	-81.122196
943	493743	CENTER	99	45	12/2/1976	SHALE	84		40.568518	-81.122963
944	766976	CENTER	99	44	7/1/1993	OLD WELL		DOMESTIC	40.569230	-81.123060
945	2013137	CENTER	125	67	10/16/2007	SHALE	2	DOMESTIC	40.568717	-81.123228
946	89199	CENTER	45	30	10/17/1952	SHALE			40.566808	-81.052138
947	143569	CENTER	74	15	5/7/1955	SHALE	24	DOMESTIC	40.568977	-81.035448
948	160573	CENTER	98	32	1/30/1956	SHALE	30	DOMESTIC	40.570011	-81.035762
949	184961	CENTER	75	40	6/15/1956	SHALE		DOMESTIC	40.563315	-81.020622
950	206077	CENTER	56	30	12/3/1953	SHALE		DOMESTIC	40.570011	-81.035762
951	353832	CENTER	125	50	6/1/1967	SHALE			40.571902	-81.039126
952	390915	CENTER	55	35	6/28/1969	SHALE		DOMESTIC	40.560589	-81.059965
953	427278	CENTER	116	75	6/28/1973	SHALE	48	DOMESTIC	40.569761	-81.050097
954	427513	CENTER	75	35	4/18/1977	CLAY & SHALE		DOMESTIC	40.560589	-81.061963
955	443611	CENTER	66	29	9/19/1972	SHALE	4	DOMESTIC	40.564236	-81.055045
956	964050	CENTER	43		6/19/2003	SHALE	2	MONITOR	40.568170	-81.024720
957	964051	CENTER	133		6/24/2003	SHALE		MONITOR	40.569470	-81.121530
958	964052	CENTER	14		7/2/2003	CLAY		MONITOR	40.565000	-81.019900
959	964053	CENTER	58		6/25/2003	SHALE & SANDSTONE	4	MONITOR	40.567900	-81.019250
960	964054	CENTER	31		7/2/2003	SHALE	6	MONITOR	40.565130	-81.021880
961	964055	CENTER	63		6/26/2003	SHALE		MONITOR	40.569350	-81.121570
962	964056	CENTER	133		6/27/2003	SHALE	8	MONITOR	40.567970	-81.019350
963	964057	CENTER	193		6/23/2003	SHALE & SANDSTONE	4	MONITOR	40.568120	-81.024870
964	964059	CENTER	138		7/3/2003	SHALE	9	MONITOR	40.565170	-81.022030
965	2023363	CENTER	10		7/24/2009	CLAY		MONITOR	40.562900	-81.020160
966	2023364	CENTER	10		7/24/2009	CLAY		MONITOR	40.565040	-81.021450
967	2023365	CENTER	10		7/27/2009	CLAY		MONITOR	40.565120	-81.021800

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968	2023366	CENTER	15		7/27/2009	CLAY		MONITOR	40.565300	-81.022810
969	2023367	CENTER	15		7/27/2009	CLAY		MONITOR	40.565870	-81.019880
970	2023371	CENTER	177		7/22/2009	SHALE & SANDSTONE	4	MONITOR	40.568116	-81.024866
971	2060107	CENTER	70	16	10/21/2016	SHALE & SILTSTONE		MONITOR	40.568089	-81.024740
972	2060108	CENTER	75	40	10/20/2016	SHALE	2	MONITOR	40.565787	-81.019938
973	2060109	CENTER	45	41.5	10/20/2016	SHALE	3	MONITOR	40.565734	-81.019985
974	829702	CENTER	125	51	1/29/1997	SANDSTONE	4	DOMESTIC	40.560469	-81.061736
975	1008074	CENTER	43	8	9/21/2012	SANDSTONE	7	DOMESTIC	40.556667	-81.054833
976	1016776	CENTER	60	11	12/4/2012	SHALE	8	DOMESTIC	40.563783	-81.054650
977	900384	CENTER	115	40	3/22/2014	SANDSTONE	17	DOMESTIC	40.567600	-81.052500
978	458309	CENTER	55	30	8/20/1973	CLAY & SHALE		DOMESTIC	40.571899	-81.044751
979	613622	CENTER	138	65	10/20/1986	SHALE	19	DOMESTIC	40.571737	-81.037984
980	1022483	CENTER	102	35	4/27/2023	SHALE	8	DOMESTIC	40.571222	-81.038021
981	766992	CENTER	88	26	9/10/1993	SHALE	13	DOMESTIC	40.570696	-81.038356
982	802805	CENTER	200	67	6/21/1995	SANDSTONE	8	DOMESTIC	40.571737	-81.037655
983	1015628	CENTER	162	82	5/31/2012				40.571333	-81.037000
984	716269	CENTER	129	30	9/13/1991	SANDSTONE		DOMESTIC	40.571108	-81.036336
985	712391	CENTER	158		12/29/1991	SHALE		DOMESTIC	40.569420	-81.035931
986	803465	CENTER	106	60	12/12/1996	SHALE	19	DOMESTIC	40.563654	-81.020437
987	1009789	CENTER	155	60	8/27/2010	SHALE	13	DOMESTIC	40.563333	-81.018850
988	781625	CENTER	142	61	10/16/1993	SHALE		DOMESTIC	40.563460	-81.016123
989	573746	CENTER	235	190	7/27/1981	CLEANOUT		DOMESTIC	40.583082	-81.106337
990	889541	CENTER	36		4/15/1999	SANDSTONE	5		40.621000	-81.050310
991	241461	CENTER	234	175		SHALE	50	DOMESTIC	40.592339	-81.103362
992	427266	CENTER	212	170	8/26/1972	SHALE	55	DOMESTIC	40.590654	-81.102351
993	427534	CENTER	208	140	12/9/1972	SHALE		DOMESTIC	40.583678	-81.107962
994	500318	CENTER	275	160	11/10/1976	SHALE	5	DOMESTIC	40.589959	-81.102923
995	679115	CENTER	193	131	9/6/1988	SANDSTONE		DOMESTIC	40.585599	-81.102520
996	573742	CENTER	165	119	7/2/1981	CLEANOUT		DOMESTIC	40.585730	-81.101596
997	764537	CENTER	200	89	11/2/1993	SANDSTONE		AGRIC/IRRIG	40.588571	-81.101702
998	671515	CENTER	365	164	11/14/1987	SANDSTONE		DOMESTIC	40.590155	-81.103123
999	464205	CENTER	210	180	10/2/1973	SHALE		DOMESTIC	40.591111	-81.102800
1000	573725	CENTER	210	170	2/25/1981	CLEANOUT		DOMESTIC	40.591111	-81.102800
1001	894269	CENTER	255	100	10/23/1999	SHALE	8	DOMESTIC	40.593880	-81.107250
1002	650362	CENTER	116	80	8/18/1987	SANDSTONE	12	DOMESTIC	40.592031	-81.104256
1003	874629	CENTER	160	90	4/3/1998	SHALE	115	DOMESTIC	40.594650	-81.107680

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
1004	883750	CENTER	204		2/25/1999	SANDSTONE	6	DOMESTIC	40.576270	-81.135300
1005	716336	CENTER	265	125	1/6/1992	SHALE	25	DOMESTIC	40.576857	-81.129105
1006	721746	CENTER	175	122	6/18/1992	SANDSTONE	6	DOMESTIC	40.577016	-81.129864
1007	573744	CENTER	198	130	7/14/1981	CLEANOUT		DOMESTIC	40.603511	-81.098026
1008	1020510	CENTER	220	165	9/23/2022	SANDSTONE	5	DOMESTIC	40.604407	-81.100386
1009	695846	CENTER	220	169	8/21/1989	OLD WELL		DOMESTIC	40.604156	-81.099040
1010	952393	CENTER	200	125	10/13/2003	SHALE	3	DOMESTIC	40.573330	-81.124830
1011	750759	CENTER	275	130		SHALE	8	DOMESTIC	40.577797	-81.130236
1012	955645	CENTER	215	143	9/10/2004	SHALE		DOMESTIC	40.588190	-81.130160
1013	642364	CENTER	53	25	5/21/1986	SHALE	5		40.572407	-81.075947
1014	766958	CENTER	191	115	4/10/1993	SANDSTONE	2	DOMESTIC	40.572417	-81.075933
1015	613604	CENTER	195	135	2/14/1984	SANDSTONE		DOMESTIC	40.571210	-81.074849
1016	750757	CENTER	175		9/28/1992	SANDSTONE	3	DOMESTIC	40.571658	-81.075786
1017	803426	CENTER	170	120	11/5/1994	SANDSTONE		DOMESTIC	40.571284	-81.075798
1018	747212	CENTER	188	140	9/20/1993	SANDSTONE	2	DOMESTIC	40.571217	-81.074995
1019	818477	CENTER	177	140	12/6/1995	SANDSTONE	10	DOMESTIC	40.600701	-81.098771
1020	653689	CENTER	175	131	9/30/1988	SHALE	20	DOMESTIC	40.600847	-81.099314
1021	844755	CENTER	198	148	2/4/1997	SANDSTONE		DOMESTIC	40.601268	-81.098612
1022	965330	CENTER	224	139	3/23/2004	SANDSTONE	4	DOMESTIC	40.601330	-81.099170
1023	659062	CENTER	223	136	1/19/1987	SHALE	5	DOMESTIC	40.601812	-81.098651
1024	186941	CENTER	69	22		SHALE			40.592628	-81.079256
1025	213512	CENTER	32	2	9/15/1958	SAND			40.596299	-81.078912
1026	356156	CENTER	85	9	11/10/1966	SHALE & SANDSTONE		DOMESTIC	40.588042	-81.081986
1027	458305	CENTER	100	40	8/6/1973	CLAY & SHALE		DOMESTIC	40.601068	-81.071048
1028	626191	CENTER	60	16	11/26/1985	SHALE		DOMESTIC	40.588064	-81.078448
1029	9910001	CENTER	448	26	6/11/1937	SANDSTONE	16		40.586263	-81.082765
1030	687777	CENTER	125	8	10/12/1988	SANDSTONE	12	AGRIC/IRRIG	40.585996	-81.075273
1031	671877	CENTER	178	138	8/28/1989	SHALE		DOMESTIC	40.600485	-81.073138
1032	679145	CENTER	162	118	12/31/1988	SHALE	6	DOMESTIC	40.601397	-81.072666
1033	1008207	CENTER	279	139	10/21/2007	SANDSTONE	82	DOMESTIC	40.601167	-81.070167
1034	1002458	CENTER	274	142	8/3/2007	LIMESTONE		DOMESTIC	40.602833	-81.068667
1035	573708	CENTER	305	160	10/14/1980	SHALE		DOMESTIC	40.585313	-81.106421
1036	671502	CENTER	330	131	9/29/1987	SANDSTONE	4		40.585247	-81.106016
1037	671503	CENTER	259	164	9/29/1987	SHALE	2		40.585243	-81.106004
1038	143586	CENTER	112	50	8/15/1955	SHALE	36	DOMESTIC	40.591955	-81.087173
1039	186942	CENTER	200	150		SAND	44	DRY/NO WATER	40.591391	-81.088347

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
1040	302814	CENTER	75	40	9/21/1963	SANDSTONE	10		40.602324	-81.085238
1041	400715	CENTER	35	20	2/21/1970	SHALE	4	DOMESTIC	40.601273	-81.085519
1042	2001630	CENTER	15	4	2/13/2006	SAND	8	MONITOR	40.574480	-81.089800
1043	2001631	CENTER	23.5	9	2/13/2006	SHALE	4	MONITOR	40.574570	-81.089770
1044	2001632	CENTER	15	2	2/13/2006	SHALE	2	MONITOR	40.574520	-81.089780
1045	2001705	CENTER	25		3/3/2006	SHALE	8	MONITOR	40.574630	-81.089720
1046	2001707	CENTER	25		3/3/2006	SHALE	8	MONITOR	40.574650	-81.089600
1047	2002613	CENTER	20	6	4/21/2006	SHALE	8	MONITOR	40.574580	-81.089880
1048	2002615	CENTER	20	20	4/21/2006	SHALE	4	MONITOR	40.574520	-81.089600
1049	2036237	CENTER	10.5	4	11/17/2011	GRAVEL	10	MONITOR	40.574483	-81.089550
1050	2036238	CENTER	12	2	11/17/2011	CLAY	4	MONITOR	40.574467	-81.089750
1051	2036239	CENTER	12	2	11/17/2011	SAND	6	MONITOR	40.574550	-81.089800
1052	2038175	CENTER	11.2		6/11/2012	SHALE	6	MONITOR	40.574450	-81.089517
1053	2038179	CENTER	7.2		6/11/2012	CLAY		MONITOR	40.574483	-81.089667
1054	2038180	CENTER	7.1		6/12/2012	CLAY		MONITOR	40.574417	-81.089883
1055	2038181	CENTER	9.5	4	6/12/2012	GRAVEL & CLAY	8	MONITOR	40.574283	-81.090033
1056	2038183	CENTER	7.5		6/12/2012	SHALE	7	MONITOR	40.574183	-81.089900
1057	2042301	CENTER	7		3/12/2013	SHALE	6	MONITOR	40.574700	-81.089500
1058	2042302	CENTER	8.5		3/12/2013	SHALE	8	MONITOR	40.574700	-81.089300
1059	2042303	CENTER	9.5		3/12/2013	SHALE	6	MONITOR	40.574300	-81.089300
1060	2042304	CENTER	7.5		3/12/2013	SANDSTONE	4	MONITOR	40.574100	-81.089500
1061	2042305	CENTER	8		3/12/2013	SANDSTONE	6	MONITOR	40.574200	-81.089800
1062	2051451	CENTER	11		2/9/2015	SANDSTONE	8	MONITOR	40.574517	-81.089933
1063	2071247	CENTER	7	3	11/2/2018	CLAY		MONITOR	40.574540	-81.089810
1064	2071248	CENTER	9	2.5	11/2/2018	GRAVEL		MONITOR	40.574500	-81.089610
1065	2071249	CENTER	7.8	2.5	11/2/2018	GRAVEL		MONITOR	40.574530	-81.089820
1066	2080303	CENTER	10		4/2/2020			MONITOR	40.574360	-81.090030
1067	125995	CENTER	102	40	8/18/1955	SAND	60	DOMESTIC	40.582454	-81.071305
1068	273749	CENTER	137	75	5/23/1963	SANDSTONE		DOMESTIC	40.580570	-81.069565
1069	520571	CENTER	145	60	8/29/1977	SANDSTONE		DOMESTIC	40.581595	-81.067558
1070	643634	CENTER	96	46	8/10/1985	OLD WELL		DOMESTIC	40.582143	-81.071861
1071	987632	CENTER	192	53	12/10/2004		5	DOMESTIC	40.581670	-81.071330
1072	635608	CENTER	102	44	5/3/1986	SHALE	12	DOMESTIC	40.581471	-81.070365
1073	702370	CENTER	192	66	11/15/1989	SANDSTONE		DOMESTIC	40.581542	-81.070443
1074	1015629	CENTER	175	105	7/14/2012	SANDSTONE	1	DOMESTIC	40.581111	-81.065833
1075	527955	CENTER	215	110	7/24/1978	SHALE			40.582850	-81.057176

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1076	671510	CENTER	264	148	10/30/1987	SANDSTONE	6		40.582957	-81.057720
1077	826766	CENTER	66	23	8/7/1998	SHALE	13	DOMESTIC	40.584710	-81.049930
1078	929258	CENTER	137	68	5/29/2001	SANDSTONE	9	DOMESTIC	40.584730	-81.049770
1079	795246	CENTER	140	70	6/20/1995	SANDSTONE		DOMESTIC	40.583323	-81.049974
1080	795220	CENTER	137	80	4/13/1995	SANDSTONE		DOMESTIC	40.585776	-81.049023
1081	2090108	CENTER	240	83	12/3/2021	SHALE		DOMESTIC	40.585780	-81.049020
1082	854835	CENTER	185	35	10/9/1997	SANDSTONE		DOMESTIC	40.584640	-81.048660
1083	803472	CENTER	211	145	8/22/1997	SHALE	1	DOMESTIC	40.586042	-81.045467
1084	877525	CENTER	250	75	8/27/1999	SHALE	3	DOMESTIC	40.586050	-81.046910
1085	2082464	CENTER	402	215	8/12/2004	SANDSTONE	2	DOMESTIC	40.583339	-81.033522
1086	783510	CENTER	255	100	3/22/1994	SHALE		DOMESTIC	40.587765	-81.045683
1087	888933	CENTER	440		4/2/1999	SANDSTONE & SHALE	8	DOMESTIC	40.587410	-81.044670
1088	1008077	CENTER	407	190	12/18/2012	SANDSTONE	4	DOMESTIC	40.591683	-81.041950
1089	716284	CENTER	195	143	8/19/1991	OLD WELL		DOMESTIC	40.568286	-81.072968
1090	883326	CENTER	135	5	6/5/2001	SANDSTONE		AGRIC/IRRIG	40.583291	-81.075980
1091	125979	CENTER	90	60	5/7/1955	SAND	15	DOMESTIC	40.592087	-81.065787
1092	186934	CENTER	86	45	5/14/1957	SHALE		DOMESTIC	40.596463	-81.065693
1093	387888	CENTER	145	70	7/25/1969	SHALE			40.594450	-81.065727
1094	427545	CENTER	110	60	4/30/1973	SANDSTONE		DOMESTIC	40.595496	-81.064971
1095	514521	CENTER	136	80	7/23/1977	SANDSTONE	6	DOMESTIC	40.595496	-81.064971
1096	695831	CENTER	138	54	5/22/1989	SANDSTONE		DOMESTIC	40.594421	-81.065839
1097	532014	CENTER	149	81	5/1/1978	SANDSTONE			40.596975	-81.065751
1098	766961	CENTER	194	94	5/3/1993	SANDSTONE		AGRIC/IRRIG	40.596953	-81.065520
1099	930220	CENTER	253	36	11/24/2001	SHALE	1	AGRIC/IRRIG	40.594540	-81.066370
1100	273710	CENTER	177	132		SANDSTONE	70	DOMESTIC	40.569214	-81.073516
1101	143773	CENTER	140	105	6/1/1954	SAND	40	DOMESTIC	40.562051	-81.042834
1102	160104	CENTER	44	12	9/17/1955	SHALE		DOMESTIC	40.563255	-81.051122
1103	473153	CENTER	142	90	6/29/1974	SHALE		DOMESTIC	40.564675	-81.050166
1104	721734	CENTER	100	50	5/13/1992	SANDSTONE	8	DOMESTIC	40.563484	-81.053947
1105	875606	CENTER	122	58	5/20/1998	SAND & ROCK	88	DOMESTIC	40.563780	-81.050340
1106	766998	CENTER	208	84	10/11/1993	SANDSTONE	8	DOMESTIC	40.563757	-81.049846
1107	612641	CENTER	72	24	8/2/1989	SHALE		DOMESTIC	40.562766	-81.037978
1108	802828	CENTER	150	54	9/13/1995	SHALE	6	DOMESTIC	40.561630	-81.034502
1109	987637	CENTER	264	96	10/16/2004		5	DOMESTIC	40.563330	-81.032670
1110	877437	CENTER	150		7/14/1998	SHALE	1	DOMESTIC	40.563150	-81.033850
1111	802844	CENTER	150	39	11/7/1995	SHALE	6	DOMESTIC	40.563133	-81.028057

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1112	902176	CENTER	150	77	9/1/1999	SHALE	2	DOMESTIC	40.562840	-81.030600
1113	802799	CENTER	100	46	5/8/1995	SHALE	2	DOMESTIC	40.563253	-81.026421
1114	909967	CENTER	71	25	12/17/2000	SHALE	20	DOMESTIC	40.563580	-81.045180
1115	930563	CENTER	115	70	7/22/2001	SANDSTONE	5	DOMESTIC	40.563700	-81.049840
1116	1013900	CENTER	95	61	11/15/2010	SANDSTONE	5	DOMESTIC	40.562090	-81.026573
1117	836927	CENTER	35	10	6/7/1996	SANDSTONE	2	DOMESTIC	40.561495	-81.027521
1118	829651	CENTER	150	100	5/6/1996	SHALE	3	DOMESTIC	40.560213	-81.026447
1119	458350	CENTER	235	125	4/12/1975	SANDSTONE		DOMESTIC	40.583082	-81.106337
1120	507558	CENTER	215	130	9/29/1977	SHALE		DOMESTIC	40.583826	-81.105732
1121	942269	CENTER	87	30	10/6/2002	SHALE	1	DOMESTIC	40.581500	-81.109250
1122	957263	CENTER	107	35	3/3/2003	CLAY & SHALE		AGRIC/IRRIG	40.582370	-81.110570
1123	635636	CENTER	231	154	9/10/1986	SHALE		DOMESTIC	40.564803	-81.072700
1124	273709	CENTER	206	150		SANDSTONE		DOMESTIC	40.564237	-81.075129
1125	318401	CENTER	196	145	8/13/1964	SANDSTONE	90	DOMESTIC	40.565870	-81.076634
1126	318421	CENTER	227	150	11/28/1964	SHALE		DOMESTIC	40.565474	-81.075856
1127	339924	CENTER	220	150	1/13/1966	SHALE	18	DOMESTIC	40.565980	-81.075387
1128	932494	CENTER	31	18	7/17/2002	SHALE		DOMESTIC	40.573330	-81.092670
1129	955603	CENTER	71	27	9/24/2002	SANDSTONE	1	DOMESTIC	40.578300	-81.098780
1130	781614	CENTER	68	17	5/28/1994	SHALE	16	DOMESTIC	40.579120	-81.105995
1131	799277	CENTER	71	15	8/3/1994	SHALE	16	DOMESTIC	40.579296	-81.106813
1132	686696	CENTER	90	40	10/14/1988	SANDSTONE		DOMESTIC	40.580237	-81.107280
1133	716333	CENTER	110	38	11/20/1991	SHALE		DOMESTIC	40.578980	-81.110484
1134	1019103	CENTER	110	28	4/15/2016	SHALE		OTHER	40.576767	-81.114333
1135	902248	CENTER	125	27	6/27/2000	SHALE	3	DOMESTIC	40.579630	-81.109240
1136	1008231	CENTER	90	40	7/31/2008	SHALE		DOMESTIC	40.574667	-81.118167
1137	125994	CENTER	46	20	8/3/1955	SHALE		DOMESTIC	40.575389	-81.089759
1138	143568	CENTER	100	55	5/7/1955	SAND		DOMESTIC	40.575339	-81.059913
1139	160102	CENTER	44	6	9/6/1955	SHALE	30	DOMESTIC	40.577321	-81.112927
1140	160148	CENTER	45	20	6/7/1957	SANDSTONE	18	DOMESTIC	40.574910	-81.071366
1141	160557	CENTER	124	65	10/16/1955	SAND		DOMESTIC	40.575473	-81.065464
1142	160558	CENTER	160	70	11/15/1955	SHALE		DOMESTIC	40.574176	-81.064146
1143	206055	CENTER	75	45	7/24/1957	SHALE	45	DOMESTIC	40.576889	-81.125138
1144	206063	CENTER	147	68		SHALE	70	DOMESTIC	40.574485	-81.068262
1145	223192	CENTER	148	112		SANDSTONE		DOMESTIC	40.574410	-81.072555
1146	239966	CENTER	50	8	6/22/1961	SHALE	30	DOMESTIC	40.574727	-81.115432
1147	241459	CENTER	90	35		SHALE		DOMESTIC	40.574643	-81.060854

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1148	241475	CENTER	130	50		SHALE	30	DOMESTIC	40.574893	-81.070020
1149	273732	CENTER	85	25		SHALE		DOMESTIC	40.574727	-81.115432
1150	318405	CENTER	138	55	9/9/1964	SANDSTONE	65	DOMESTIC	40.577833	-81.041810
1151	339950	CENTER	60	30	7/7/1966	SHALE	42	DOMESTIC	40.576058	-81.115699
1152	356739	CENTER	182	110	11/4/1968	SANDSTONE			40.564424	-81.068385
1153	370053	CENTER	182	130	9/4/1967	SANDSTONE		DOMESTIC	40.564832	-81.064596
1154	372002	CENTER	230	125	3/4/1968	SAND	30	DOMESTIC	40.572078	-81.050378
1155	379789	CENTER	100	40		SHALE	60	DOMESTIC	40.579973	-81.034752
1156	390908	CENTER	42	15	4/21/1969	SANDSTONE		DOMESTIC	40.578067	-81.111225
1157	396669	CENTER	86	25		SHELL	55	DOMESTIC	40.574727	-81.115432
1158	400725	CENTER	52	10	4/28/1970	SAND	3	DOMESTIC	40.580023	-81.038650
1159	432440	CENTER	65	30	7/25/1972	LIMESTONE	4	DOMESTIC	40.586238	-81.027940
1160	449837	CENTER	145	110	11/24/1973	SHALE		DOMESTIC	40.575621	-81.066280
1161	464187	CENTER	176	145	7/10/1974	SAND	4		40.575621	-81.066280
1162	477475	CENTER	235	60	10/27/1975	SANDSTONE		DOMESTIC	40.582302	-81.031304
1163	514507	CENTER	132	98	5/8/1977	SHALE	2	DOMESTIC	40.562325	-81.064867
1164	514510	CENTER	93	38	5/19/1977	SHALE	10	DOMESTIC	40.578908	-81.110323
1165	522361	CENTER	106	29	5/28/1978	SHALE & SANDSTONE	48	DOMESTIC	40.574786	-81.116184
1166	522400	CENTER	89	12	11/27/1978	SHALE	55	DOMESTIC	40.573313	-81.122864
1167	527989	CENTER	151	110	7/14/1979	SHALE		DOMESTIC	40.564832	-81.064596
1168	2034523	CENTER	150		9/20/2011	SHALE	3	HEATING/COOLING	40.573930	-81.073590
1169	550256	CENTER	163	220	10/5/1979	SANDSTONE	14	DOMESTIC	40.576035	-81.073379
1170	820033	CENTER	320	116	7/26/1995	SHALE		DOMESTIC	40.576251	-81.073514
1171	790963	CENTER	200	120	8/23/1994	SANDSTONE	3	DOMESTIC	40.575904	-81.072288
1172	1012489	CENTER	170	123	5/5/2010	SHALE		DOMESTIC	40.574230	-81.064760
1173	2048757	CENTER	150	40	8/15/2014	SANDSTONE & SHALE		DOMESTIC	40.575328	-81.066883
1174	2049021	CENTER	150	40	8/15/2014	SANDSTONE & SHALE		DOMESTIC	40.575328	-81.066883
1175	534158	CENTER	62	3	11/6/1978	SANDSTONE	14	DOMESTIC	40.571931	-81.050101
1176	1019676	CENTER	165	88	1/6/2017	SHALE		DOMESTIC	40.573610	-81.049410
1177	514532	CENTER	103	30	10/19/1977	SAND	2	DOMESTIC	40.572553	-81.046957
1178	798484	CENTER	102	29	10/9/1994	SHALE		DOMESTIC	40.575615	-81.043216
1179	716309	CENTER	206	78	8/10/1990	SHALE	3	DOMESTIC	40.578254	-81.039495
1180	2038771	CENTER	220	52	7/30/2012	SHALE	2	DOMESTIC	40.582902	-81.040615
1181	476241	CENTER	208	130	9/30/1975	SHALE	4	DOMESTIC	40.582974	-81.028996
1182	702374	CENTER	243	54	12/14/1989	SANDSTONE	235	DOMESTIC	40.589613	-81.027510
1183	1021425	CENTER	225	54	8/25/2020	SANDSTONE	8	DOMESTIC	40.581710	-81.040483

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
1184	186928	CENTER	92	45	4/4/1957	SHALE	48	DOMESTIC	40.566196	-81.090712
1185	370052	CENTER	196	150	8/24/1967	SANDSTONE	75	DOMESTIC	40.560706	-81.093522
1186	372033	CENTER	300	150	7/23/1968	CORED	3		40.560667	-81.094401
1187	396662	CENTER	186	145		SANDSTONE	80	DOMESTIC	40.561626	-81.092913
1188	396663	CENTER	195	145	7/21/1970	SANDSTONE	100	DOMESTIC	40.560706	-81.093522
1189	396670	CENTER	217	165	9/12/1970	SANDSTONE	26		40.562676	-81.092727
1190	578663	CENTER	130	38	10/20/1981	SANDSTONE		DOMESTIC	40.564233	-81.095603
1191	601534	CENTER	228	114	7/12/1982	SHALE	4		40.560667	-81.094401
1192	952363	CENTER	75		12/16/2002	LOAM	1	AGRIC/IRRIG	40.559713	-81.099167
1193	1019700	CENTER	175	68	2/28/2017	SHALE	10	DOMESTIC	40.564796	-81.092012
1194	702375	CENTER	267	118	1/2/1990	SHALE		DOMESTIC	40.560582	-81.094802
1195	752307	CENTER	270	119	9/21/1992	SHALE			40.560577	-81.094772
1196	626194	CENTER	202	136	12/9/1985	COAL	2	DOMESTIC	40.568088	-81.073638
1197	532046	CENTER	204	147	11/15/1978	COAL		DOMESTIC	40.567252	-81.072091
1198	628448	CENTER	157	95	1/21/1987	SHALE			40.566471	-81.072559
1199	522696	CENTER	208	135	3/15/1979	SHALE & SANDSTONE	145		40.567021	-81.071670
1200	643606	CENTER	298	147	10/25/1984	SHALE	2	DOMESTIC	40.567021	-81.071670
1201	599275	CENTER	181	120	5/27/1983	SANDSTONE			40.566193	-81.071589
1202	671531	CENTER	238	140	4/4/1988	SANDSTONE	8		40.565860	-81.068640
1203	671535	CENTER	187	107	4/25/1988	SHALE		DOMESTIC	40.564553	-81.068712
1204	702373	CENTER	252	113	12/1/1989	FILL MATERIAL	2	DOMESTIC	40.564135	-81.068279
1205	798482	CENTER	101	30	10/1/1994	SHALE	15	DOMESTIC	40.564861	-81.066880
1206	1016785	CENTER	179	97	5/22/2013	SANDSTONE	8	DOMESTIC	40.563417	-81.067500
1207	993266	CENTER	200	80	4/7/2006		8	DOMESTIC	40.565430	-81.069710
1208	982384	CENTER	160	59	1/16/2005	SANDSTONE	10	DOMESTIC	40.565150	-81.069260
1209	965327	CENTER	208	98	2/17/2004	SANDSTONE	4	DOMESTIC	40.562170	-81.065830
1210	706283	CENTER	144	95	8/19/1991	GRAVEL		DOMESTIC	40.561997	-81.064766
1211	2039049	CENTER	180	50	8/9/2012	SANDSTONE		DOMESTIC	40.561667	-81.065750
1212	671514	CENTER	165	95	11/10/1987	SHALE	2	DOMESTIC	40.561652	-81.064448
1213	883343	CENTER	177	84	2/29/2000	SANDSTONE	3	DOMESTIC	40.561500	-81.063166
1214	829484	CENTER	140		5/30/1996	COAL	51		40.579589	-81.089752
1215	601507	CENTER	188	140	7/2/1981	SHALE	4	DOMESTIC	40.584553	-81.103685
1216	679107	CENTER	254	102	8/8/1988	SHALE	5	DOMESTIC	40.581088	-81.104647
1217	679106	CENTER	223	137	8/1/1988	SHALE	14	DOMESTIC	40.581953	-81.106789
1218	757312	CENTER	239	132	8/16/1993	SHALE	18	DOMESTIC	40.581908	-81.104375
1219	671528	CENTER	351	118	1/30/1988	SHALE	2	DOMESTIC	40.582784	-81.104086

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
1220	635606	CENTER	125	50	4/29/1986	SHALE			40.565972	-81.074764
1221	708593	CENTER	226	163	4/3/1990	SANDSTONE		DOMESTIC	40.565351	-81.075014
1222	1008242	CENTER	250	163	11/5/2008			DOMESTIC	40.565410	-81.075240
1223	255391	CENTER	147	75		SANDSTONE	20	DOMESTIC	40.601812	-81.098651
1224	296858	CENTER	138	100	8/13/1963	SANDSTONE	8	DOMESTIC	40.601812	-81.098651
1225	296868	CENTER	135	75		SANDSTONE	20	DOMESTIC	40.572066	-81.068027
1226	296879	CENTER	150	80	6/27/1964	SANDSTONE	12	DOMESTIC	40.601820	-81.098655
1227	318422	CENTER	210	140	12/15/1964	SHALE		DOMESTIC	40.601812	-81.098651
1228	318437	CENTER	137	85	6/21/1965	SANDSTONE	15	DOMESTIC	40.601812	-81.098651
1229	318449	CENTER	272	135		SANDSTONE	52	DOMESTIC	40.601812	-81.098651
1230	339923	CENTER	220	85	3/17/1966	SANDSTONE	60	DOMESTIC	40.601812	-81.098651
1231	339942	CENTER	197	160	6/12/1966	SANDSTONE		DOMESTIC	40.601812	-81.098651
1232	353809	CENTER	208	170	7/22/1966	SANDSTONE	146	DOMESTIC	40.572066	-81.068027
1233	353820	CENTER	212	140	11/17/1966	SHALE	5	DOMESTIC	40.601812	-81.098651
1234	353827	CENTER	193	160		SANDSTONE		DOMESTIC	40.601124	-81.097520
1235	427280	CENTER	200	140	7/5/1973	SANDSTONE	45	DOMESTIC	40.568958	-81.069961
1236	466161	CENTER	185	75	12/4/1973	SHALE	25		40.601812	-81.098651
1237	491635	CENTER	220	165	9/15/1976	SANDSTONE	15	DOMESTIC	40.601812	-81.098651
1238	495801	CENTER	195	140	6/14/1976	SANDSTONE	45	DOMESTIC	40.569464	-81.068378
1239	527991	CENTER	178	100	7/16/1979	SHALE	16	DOMESTIC	40.601812	-81.098651
1240	626197	CENTER	224	156	1/27/1986	SANDSTONE	10	DOMESTIC	40.574410	-81.069090
1241	766955	CENTER	265	151	3/30/1993	OLD WELL		DOMESTIC	40.573759	-81.069047
1242	766980	CENTER	245	160	7/28/1993	SANDSTONE		DOMESTIC	40.573392	-81.069103
1243	520509	CENTER	225	140	6/14/1977	SANDSTONE			40.571408	-81.069482
1244	481313	CENTER	180	70	12/18/1974	SHALE	10	DOMESTIC	40.571187	-81.067882
1245	516389	CENTER	214	155	3/18/1978	SANDSTONE	10	DOMESTIC	40.570613	-81.068025
1246	520510	CENTER	215	140	6/14/1977	SANDSTONE			40.570607	-81.069532
1247	810088	CENTER	221	146	12/4/1995	SHELL	17	DOMESTIC	40.569454	-81.070096
1248	909970	CENTER	221	148	12/8/2000	CLEANOUT		DOMESTIC	40.569550	-81.045780
1249	752309	CENTER	206	126	10/7/1992	OLD WELL		DOMESTIC	40.568185	-81.069426
1250	708597	CENTER	213	134	5/7/1990	OLD WELL		DOMESTIC	40.568181	-81.070286
1251	550280	CENTER	209	135	7/17/1980	SHALE	7	DOMESTIC	40.567232	-81.069441
1252	766984	CENTER	216	134	8/11/1993	OLD WELL		DOMESTIC	40.567265	-81.070728
1253	613609	CENTER	265	140	7/26/1984	SAND	17	DOMESTIC	40.566489	-81.070145
1254	213524	EAST	45	3	4/3/1959	SAND		DOMESTIC	40.671231	-80.974053
1255	49419	EAST	76	1	1/1/1951	SANDSTONE	18		40.660306	-80.966121

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1256	120570	EAST	105	47	1/17/1954	SANDSTONE	17	DOMESTIC	40.674431	-80.977693
1257	120571	EAST	85	45	1/19/1954	SANDSTONE	7	DOMESTIC	40.666845	-80.955171
1258	143567	EAST	116	60	5/7/1955	SHALE	20	DOMESTIC	40.669375	-80.968666
1259	671884	EAST	166	105	4/10/1990	SHALE			40.644873	-80.990895
1260	803445	EAST	108	68	10/27/1995	SHALE	1	DOMESTIC	40.644895	-80.990851
1261	1009784	EAST	300	80	7/2/2010	SANDSTONE & SHALE		AGRIC/IRRIG	40.644506	-80.984192
1262	803436	EAST	269	135	9/11/1995	SHALE	1	AGRIC/IRRIG	40.644544	-80.967130
1263	2088722	EAST	165	99	9/29/2021	SANDSTONE	9	DOMESTIC	40.676500	-80.992167
1264	924867	EAST	195	40	7/14/2003	SANDSTONE & SHALE	6	DOMESTIC	40.683890	-81.005530
1265	901801	EAST	148	40	12/10/1999	SHALE		DOMESTIC	40.680870	-80.993070
1266	829727	EAST	103	63	1/27/1996	SHALE	4	DOMESTIC	40.679243	-80.986345
1267	803434	EAST	103	35	3/27/1995	SHALE	2	DOMESTIC	40.676810	-80.983959
1268	761886	EAST	87	45	9/2/1990	SHALE	1	DOMESTIC	40.676588	-80.981433
1269	913082	EAST	165	61	1/23/2001	CLAY & SANDSTONE	10	DOMESTIC	40.679870	-80.990450
1270	642363	EAST	67	30	5/9/1986	SANDSTONE			40.676196	-80.978269
1271	747193	EAST	65	20	9/7/1992	SHALE	6	DOMESTIC	40.675487	-80.976980
1272	747178	EAST	165	105	3/6/1992	SHALE		DOMESTIC	40.673405	-80.974983
1273	803430	EAST	148	100	12/1/1994	SHALE	2	DOMESTIC	40.671272	-80.974550
1274	676856	EAST	200			SAND			40.669084	-80.968284
1275	679149	EAST	353	144	3/10/1989	SANDSTONE		DOMESTIC	40.668927	-80.967790
1276	891100	EAST	184	85	7/17/1999	SANDSTONE	108	DOMESTIC	40.670340	-80.973400
1277	858501	EAST	89	29	7/22/1997	SANDSTONE	17	DOMESTIC	40.664764	-80.957453
1278	527976	EAST	142	90	11/30/1978	SHALE		DOMESTIC	40.668080	-80.961548
1279	1008276	EAST	223	78	11/21/2007	SANDSTONE & SHALE		DOMESTIC	40.665730	-80.961900
1280	2050791	EAST	180	80	1/19/2015	SANDSTONE & SHALE	2	DOMESTIC	40.668600	-80.955700
1281	527969	EAST	175	125	11/10/1978	SHALE		DOMESTIC	40.668235	-80.954244
1282	2011594	EAST	100	40	8/7/2007	SANDSTONE	2	DOMESTIC	40.665430	-80.950020
1283	25337	EAST	207		2/9/1953	SANDSTONE	12		40.648641	-80.964250
1284	92675	EAST	82	35		SHALE	18		40.658398	-80.959928
1285	143761	EAST	122	85	5/5/1954	SHALE		DOMESTIC	40.644865	-80.964120
1286	143763	EAST	150	60	5/5/1954	SAND		DOMESTIC	40.645025	-80.966776
1287	321807	EAST	95	42	11/3/1964	SILTSTONE		DOMESTIC	40.664663	-80.964689
1288	372009	EAST	116	53.6	4/12/1968	LIMESTONE	8	DOMESTIC	40.674419	-80.965474
1289	427267	EAST	124	20	9/18/1972	SHALE			40.675548	-80.964729
1290	516353	EAST	125	50	4/9/1977	SHALE		DOMESTIC	40.676394	-80.965668
1291	516374	EAST	100	25	8/20/1977	SHALE	18	DOMESTIC	40.685500	-80.964180

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1292	516375	EAST	106	90	8/27/1977	SHALE		DOMESTIC	40.673916	-80.964314
1293	527961	EAST	96	30	8/26/1978	SHALE	12	DOMESTIC	40.660372	-80.964735
1294	550267	EAST	102	45	2/28/1980	SHALE			40.668458	-80.965426
1295	550272	EAST	102	50	5/14/1980	SHALE		DOMESTIC	40.684688	-80.962761
1296	891147	EAST	155	66	9/3/2000	CLEANOUT	66	DOMESTIC	40.644360	-80.959930
1297	970910	EAST	205	98	7/28/2004	SANDSTONE	3	DOMESTIC	40.649720	-80.967780
1298	984145	EAST	218	100	4/17/2005	SANDSTONE & SHALE	2	DOMESTIC	40.648569	-80.965296
1299	955565	EAST	125	37	5/1/2004			DOMESTIC	40.648160	-80.965360
1300	2049429	EAST	88	30	10/2/2014	SANDSTONE	2	DOMESTIC	40.658850	-80.964920
1301	861084	EAST	115	50	9/7/1998	SHALE	2	DOMESTIC	40.660301	-80.963508
1302	473192	EAST	92	52	8/16/1975	SANDSTONE	15	DOMESTIC	40.662791	-80.964626
1303	516373	EAST	139	80	8/20/1977	SHALE		DOMESTIC	40.664663	-80.964689
1304	747220	EAST	101	60		SHALE			40.668719	-80.965392
1305	942192	EAST	250	94	10/20/2003	SANDSTONE		DOMESTIC	40.684290	-80.964910
1306	942193	EAST	250		10/20/2003	SHALE	173	DOMESTIC	40.684290	-80.964910
1307	2055513	EAST	340	200	12/23/2015	SHALE		DOMESTIC	40.673508	-80.964562
1308	612637	EAST	237	100	6/19/1984	SHALE	2	DOMESTIC	40.673747	-80.965436
1309	839459	EAST	246	100	3/8/1997	SHALE	3	PUBLIC/SEMI-PUB	40.675970	-80.964830
1310	939437	EAST	380	114	8/27/2002	SHALE	11	DOMESTIC	40.677000	-80.965420
1311	3009140	EAST	380	157	7/12/2023	SHALE		DOMESTIC	40.676060	-80.965399
1312	708586	EAST	238	71	6/18/1990	SHALE		DOMESTIC	40.676686	-80.965495
1313	839439	EAST	248	71	9/5/1996	SANDSTONE		DOMESTIC	40.676686	-80.965495
1314	888108	EAST	242	132	7/19/1999	SHALE	3	DOMESTIC	40.686010	-80.965260
1315	1014636	EAST	115	41	7/1/2011	LIMESTONE		DOMESTIC	40.686867	-80.968817
1316	1019117	EAST	210	99	4/12/2017	SHALE	4	DOMESTIC	40.648462	-80.963336
1317	384836	EAST	92	55	8/12/1970	SANDSTONE			40.644458	-80.991056
1318	747244	EAST	198	100	3/3/1993	SANDSTONE		DOMESTIC	40.579589	-81.089752
1319	173393	EAST	37		1/26/1957	SHALE	34		40.693249	-80.984884
1320	427276	EAST	170	95	5/28/1973	SHALE		DOMESTIC	40.645012	-80.983956
1321	671862	EAST	88	35	9/24/1988	SHALE		DOMESTIC	40.692080	-80.984354
1322	601571	EAST	260	150	7/22/1981	SANDSTONE	20	DOMESTIC	40.648410	-80.984038
1323	883340	EAST	160	11	4/14/2000	SHALE	3	DOMESTIC	40.660880	-80.984080
1324	477462	EAST	175		7/14/1975	SHALE	150	DOMESTIC	40.656425	-80.986887
1325	671874	EAST	164	90	6/3/1989	SHALE			40.657420	-80.984465
1326	803447	EAST	298	115	12/13/1995	SHALE		AGRIC/IRRIG	40.657420	-80.984465
1327	803448	EAST	391	140	3/14/1996	SHALE	2	DOMESTIC	40.657420	-80.984465

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1328	931411	EAST	125	50	12/3/2001	SANDSTONE		AGRIC/IRRIG	40.664373	-80.978767
1329	923089	EAST	100	30	1/25/2001	SHALE	7	DOMESTIC	40.680608	-80.985944
1330	913083	EAST	85	10	1/19/2001	CLAY & SHALE		DOMESTIC	40.682180	-80.989950
1331	993310	EAST	120	40	10/24/2006		4	DOMESTIC	40.682200	-80.986333
1332	2065925	EAST	260	160	11/20/2017	SANDSTONE	9	DOMESTIC	40.648390	-80.986060
1333	601532	EAST	131	70	6/14/1982	SHALE	4	DOMESTIC	40.684052	-80.985082
1334	861096	EAST	178	100	9/22/1999	SHALE	1	DOMESTIC	40.680040	-80.984480
1335	901803	EAST	124	25	9/30/1999	SHELL		DOMESTIC	40.680060	-80.984120
1336	942253	EAST	100	30	2/23/2002	CLAY & SHALE	2	AGRIC/IRRIG	40.686650	-80.982430
1337	1016805	EAST	115	30	9/12/2015	LIMESTONE		AGRIC/IRRIG	40.686683	-80.982483
1338	2056276	EAST	180	20	3/7/2016	SHALE	9	DOMESTIC	40.689420	-80.984770
1339	803441	EAST	152	40	8/11/1995	SHALE		DOMESTIC	40.690052	-80.981558
1340	803443	EAST	154	40	12/4/1995	SHALE		DOMESTIC	40.693606	-80.984253
1341	160598	EAST	92	60	10/9/1956	SHALE	30		40.670284	-80.990277
1342	173367	EAST	69		6/23/1956	SHALE	15	DOMESTIC	40.678832	-80.959379
1343	289193	EAST	395	222	7/3/1964	SHALE			40.677826	-80.962173
1344	427264	EAST	140	80	6/29/1972	SHALE		DOMESTIC	40.673883	-80.967936
1345	908269	EAST	340		5/22/2000	SANDSTONE		DOMESTIC	40.669710	-80.988480
1346	752282	EAST	282	109	5/16/1992	SHALE	14	DOMESTIC	40.669028	-80.977371
1347	757244	EAST	198	100	3/3/1993	SHALE		DOMESTIC	40.675081	-80.974103
1348	120569	EAST	38	16	1/16/1954	SANDSTONE	14	DOMESTIC	40.678884	-80.975691
1349	516354	EAST	102	60	6/16/1977	SANDSTONE	18	DOMESTIC	40.677543	-80.978584
1350	611552	EAST	100	60	7/21/1981	SHALE			40.676989	-80.978224
1351	642389	EAST	115	40	7/31/1988	SHALE	3	DOMESTIC	40.677082	-80.978844
1352	781583	EAST	206	76	11/1/1993	SHALE	5	DOMESTIC	40.679655	-80.973298
1353	92672	EAST	62	15		SHALE	42		40.658531	-80.965841
1354	92696	EAST	60	30	10/23/1953	SHALE		DOMESTIC	40.657609	-80.982373
1355	143560	EAST	96	50	11/13/1954	SAND	37	DOMESTIC	40.662694	-80.951847
1356	491640	EAST	119	60	10/8/1976	SHALE		DOMESTIC	40.658568	-80.973543
1357	493748	EAST	220	95	4/4/1977	SHALE	1		40.657600	-80.980326
1358	781621	EAST	335	116	7/12/1994	SHALE		AGRIC/IRRIG	40.657561	-80.980229
1359	820030	EAST	246	109	7/11/1995	FILL MATERIAL		AGRIC/IRRIG	40.657508	-80.980857
1360	428563	EAST	215		10/9/1971	SANDSTONE	8	DOMESTIC	40.668894	-80.974927
1361	465248	EAST	180		11/12/1973	SANDSTONE	65	DOMESTIC	40.668820	-80.973944
1362	534175	EAST	138	80	8/22/1979	SANDSTONE	85	DOMESTIC	40.664428	-80.974018
1363	613643	EAST	79	30	12/5/1987	SHALE	28	DOMESTIC	40.664085	-80.980185

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
1364	1021456	EAST	177	117	12/21/2022	SANDSTONE	25	DOMESTIC	40.668806	-80.974764
1365	967501	EAST	200	107	7/29/2004	LOAM	1	DOMESTIC	40.646830	-80.956260
1366	671869	EAST	80	35	11/17/1988	SHALE	3	DOMESTIC	40.650256	-80.957673
1367	861086	EAST	104	55	8/13/1998	SHALE	2	DOMESTIC	40.646920	-80.955550
1368	955610	EAST	200	98	4/15/2003	OLD WELL		DOMESTIC	40.653000	-80.950830
1369	944365	EAST	300	80	11/26/2002	SANDSTONE	3	DOMESTIC	40.647300	-80.955520
1370	550252	EAST	102	50	8/29/1979	SHALE	23	DOMESTIC	40.654306	-80.950681
1371	957262	EAST	207	90	2/27/2003	SANDSTONE	2	DOMESTIC	40.655480	-80.951670
1372	901807	EAST	114	70	12/11/1999	SHALE	1	DOMESTIC	40.657456	-80.950773
1373	3012565	EAST	130	50	1/3/2024	SHALE	2	DOMESTIC	40.657792	-80.946852
1374	861092	EAST	135	85	10/31/1998	SHALE		DOMESTIC	40.658432	-80.951265
1375	957297	EAST	225	122	7/20/2004	EXISTING WELL		DOMESTIC	40.658480	-80.951450
1376	3009009	EAST	240	95	7/19/2023	SANDSTONE	6	AGRIC/IRRIG	40.658440	-80.951875
1377	901805	EAST	178	130	12/2/1999	SANDSTONE	1	DOMESTIC	40.659357	-80.951879
1378	898286	EAST	158	110	11/1/2000	LIMESTONE	5	DOMESTIC	40.660747	-80.952616
1379	143753	EAST	77	45	5/5/1954	SHALE	35	DOMESTIC	40.654414	-80.950520
1380	160577	EAST	67	27	5/2/1956	SANDSTONE	30	DOMESTIC	40.655663	-80.950871
1381	339929	EAST	130	50	3/25/1966	SANDSTONE		DOMESTIC	40.655208	-80.951192
1382	432419	EAST	134	45	4/29/1972	SHALE		DOMESTIC	40.656309	-80.951406
1383	458316	EAST	95	65	1/3/1973	SHALE	17	DOMESTIC	40.700195	-80.992039
1384	601271	EAST	70	20	6/24/1981	SHALE	30	DOMESTIC	40.697405	-80.991730
1385	747184	EAST	84	30	6/3/1992	SHALE	14	DOMESTIC	40.696661	-80.986672
1386	803458	EAST	126	85	8/28/1996	SHALE	8	DOMESTIC	40.694808	-80.983617
1387	612608	EAST	263	129	7/13/1983	SHALE	3	DOMESTIC	40.685566	-80.993516
1388	659067	EAST	281	160	2/21/1987	SHALE		DOMESTIC	40.685566	-80.993516
1389	49423	FOX	217	150	1/1/1950	SAND	41		40.617648	-80.954940
1390	50478	FOX	83		1/1/1951	SHALE	19		40.607430	-80.953809
1391	49414	FOX	100	65	1/1/1950	SHALE	30		40.616424	-80.969494
1392	390921	FOX	198	84	10/6/1969	CLAY & SHALE	6	DOMESTIC	40.581920	-80.975271
1393	390922	FOX	250	84	10/6/1969	CLAY & SHALE	201	DOMESTIC	40.581920	-80.975271
1394	509496	FOX	90	55	7/3/1978	SHALE	38	DOMESTIC	40.581133	-80.971758
1395	49406	FOX	180	60	1/1/1950	SHALE	40		40.619990	-80.947110
1396	49415	FOX	80	35	1/1/1949	SHALE	22		40.616817	-80.935539
1397	49422	FOX	193	140	1/1/1950	SAND	40		40.616642	-80.935394
1398	92693	FOX	45	10	10/16/1953	SHALE	21	DOMESTIC	40.616336	-80.964118
1399	143757	FOX	195	100	5/5/1954	SAND	38	DOMESTIC	40.619436	-80.944872

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
1400	160586	FOX	211	140		SAND	20		40.620083	-80.948314
1401	206093	FOX	102	75		SHALE	25	DOMESTIC	40.617449	-80.975552
1402	223180	FOX	230	150		SAND		DOMESTIC	40.616634	-80.941794
1403	255386	FOX	248	170		SANDSTONE	38		40.618643	-80.950984
1404	255398	FOX	240	150		LIMESTONE	36	DOMESTIC	40.618100	-80.952800
1405	255399	FOX	236	150		SHALE	38		40.618910	-80.952527
1406	273718	FOX	224	150		SANDSTONE	42	DOMESTIC	40.617591	-80.943052
1407	273727	FOX	240	150		SANDSTONE	45		40.618576	-80.953472
1408	273730	FOX	40	18		SHALE	27	DOMESTIC	40.616032	-80.971508
1409	273745	FOX	248	180		SANDSTONE	40		40.618927	-80.952906
1410	370062	FOX	200	140		SANDSTONE		DOMESTIC	40.618496	-80.943300
1411	379783	FOX	210	110		SHALE		DOMESTIC	40.617413	-80.957183
1412	379784	FOX	240	135		SANDSTONE	30		40.617572	-80.953318
1413	396692	FOX	71	20	7/30/1971	LIMESTONE		DOMESTIC	40.618782	-80.952939
1414	396693	FOX	220	125	7/30/1971	SHALE	40	DOMESTIC	40.617808	-80.954586
1415	400721	FOX	81	20	4/9/1970	SAND	30	DOMESTIC	40.616379	-80.964322
1416	427272	FOX	108		10/20/1972	SHALE		DOMESTIC	40.616810	-80.969379
1417	473171	FOX	224	150	4/18/1975	SANDSTONE	44		40.618775	-80.942756
1418	527990	FOX	228	155	6/23/1979	SANDSTONE			40.618623	-80.937609
1419	573728	FOX	240	190	3/20/1981	CLEANOUT		DOMESTIC	40.618134	-80.952544
1420	578677	FOX	231	151	3/9/1982	CLEANOUT		DOMESTIC	40.617868	-80.952916
1421	985780	FOX	160	60	12/2/2004		3	DOMESTIC	40.616970	-80.972920
1422	481767	FOX	80		2/5/1975	SHALE		DOMESTIC	40.635286	-80.942260
1423	3004214	FOX	97	31	10/25/2022	SANDSTONE	18	DOMESTIC	40.634100	-80.961140
1424	143587	FOX	165	85	8/15/1955	SAND	45	DOMESTIC	40.624276	-80.956704
1425	186933	FOX	98	40	5/14/1957	SAND		DOMESTIC	40.630833	-80.953565
1426	206092	FOX	82	21		SHALE	47	DOMESTIC	40.641443	-80.957249
1427	273702	FOX	60	30		SHALE	30	DOMESTIC	40.631160	-80.950698
1428	296867	FOX	180	140	10/22/1963	SANDSTONE	32	DOMESTIC	40.642440	-80.936481
1429	379757	FOX	140	35		LIMESTONE	45	DOMESTIC	40.584296	-80.960809
1430	400713	FOX	240	150	2/17/1970	SAND	18	DOMESTIC	40.621344	-80.953965
1431	411967	FOX	264	140	10/28/1970	SHALE		DOMESTIC	40.621344	-80.953965
1432	427279	FOX	104	50	7/12/1973	SANDSTONE	24	DOMESTIC	40.566179	-80.965561
1433	427285	FOX	65	25	10/17/1973	SHALE	15	DOMESTIC	40.629361	-80.954963
1434	443606	FOX	165	115	9/7/1972	SAND		DOMESTIC	40.642064	-80.937630
1435	477486	FOX	57	13	4/5/1976	SHALE	8	DOMESTIC	40.571223	-80.968188

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1436	491602	FOX	67	18	10/11/1975	SHALE	38	DOMESTIC	40.636322	-80.938282
1437	491631	FOX	72	22	7/16/1976	FIRE CLAY	10	DOMESTIC	40.634632	-80.941642
1438	527985	FOX	73	10	6/8/1979	SHALE	9	DOMESTIC	40.634016	-80.940865
1439	611567	FOX	80	39	8/19/1983	SHALE	8		40.573408	-80.963509
1440	671900	FOX	140	95	12/11/1990	SHALE			40.572659	-80.963629
1441	891159	FOX	192	44.5	12/12/2000	SHALE		DOMESTIC	40.574287	-80.964176
1442	449847	FOX	110	65	5/4/1974	SHALE		DOMESTIC	40.584230	-80.961570
1443	747185	FOX	172	40	6/22/1992	SHALE		DOMESTIC	40.577814	-80.961918
1444	2060516	FOX	300	92	11/22/2016	SHALE		AGRIC/IRRIG	40.566300	-80.965783
1445	2060517	FOX	300	99	11/23/2016	SHALE		TEST WELL	40.566300	-80.965783
1446	2083760	FOX	170	39	12/12/2020	SHALE		DOMESTIC	40.566267	-80.965933
1447	615947	FOX	105	32	1/27/1987	SHALE	16	DOMESTIC	40.586020	-80.961270
1448	578654	FOX	300	75	9/18/1981	SANDSTONE		DOMESTIC	40.584888	-80.959486
1449	650358	FOX	105	24	7/18/1987	SHALE	16	DOMESTIC	40.585685	-80.960435
1450	822639	FOX	139	57	11/10/1995	COAL		DOMESTIC	40.557923	-80.971885
1451	671853	FOX	100	55	7/15/1988	SHALE		DOMESTIC	40.587965	-80.958718
1452	613619	FOX	243	210	9/18/1986	SANDSTONE	8	DOMESTIC	40.621778	-80.952774
1453	790943	FOX	100	27	7/1/1994	SANDSTONE	4	DOMESTIC	40.629891	-80.955119
1454	942260	FOX	96	23	8/23/2002	SANDSTONE	1	DOMESTIC	40.634530	-80.940380
1455	1016806	FOX	157	31	9/28/2015	SANDSTONE		DOMESTIC	40.635767	-80.938717
1456	516357	FOX	95	35	5/7/1977	SANDSTONE	42	DOMESTIC	40.634616	-80.940481
1457	795207	FOX	90	60	6/10/1994	SANDSTONE		DOMESTIC	40.634899	-80.937752
1458	1021449	FOX	105	22	6/6/2022	SANDSTONE		DOMESTIC	40.636164	-80.937147
1459	613617	FOX	83	30	6/9/1986	SHALE	5	DOMESTIC	40.636242	-80.935380
1460	92694	FOX	60	30	10/17/1953	SHALE	29	DOMESTIC	40.634170	-80.960719
1461	339901	FOX	50	30		SHALE	28	DOMESTIC	40.633619	-80.961025
1462	339902	FOX	35	12		SANDSTONE		DOMESTIC	40.639697	-80.955795
1463	427251	FOX	60	6		SANDSTONE	44	DOMESTIC	40.643797	-80.957475
1464	427294	FOX	145	85	4/22/1974	SHALE		DOMESTIC	40.643900	-80.962361
1465	473175	FOX	100	65	5/16/1975	SHALE	10	DOMESTIC	40.636525	-80.957634
1466	473198	FOX	84	50	9/6/1975	SHALE	10		40.637126	-80.957864
1467	613615	FOX	172	65	7/12/1985	SHALE		DOMESTIC	40.642267	-80.963132
1468	795229	FOX	315	100	1/20/1996	SHALE		DOMESTIC	40.628153	-80.959384
1469	696726	FOX	350	322	4/5/1989	SHALE	10	DOMESTIC	40.579589	-81.089752
1470	143785	FOX	230	150	7/26/1954	SAND	28	DOMESTIC	40.598048	-80.937018
1471	379768	FOX	80	50		SHALE		DOMESTIC	40.568779	-80.971080

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1472	379782	FOX	65	30		SHALE		DOMESTIC	40.576782	-80.945342
1473	390932	FOX	92	60	9/8/1970	SHALE	4	DOMESTIC	40.577184	-80.975550
1474	396685	FOX	80	45		SHALE	28	DOMESTIC	40.574167	-80.955190
1475	464182	FOX	105	75	6/13/1974	SAND	4		40.576455	-80.963382
1476	473152	FOX	35	20	6/20/1974	SHALE		DOMESTIC	40.576455	-80.963382
1477	499247	FOX	128	86	12/5/1977	SHALE	17		40.579671	-80.976518
1478	772470	FOX	109	60	1/25/1994	SANDSTONE		DOMESTIC	40.581700	-81.025402
1479	757239	FOX	108	55	11/9/1992	SHALE	3	DOMESTIC	40.581696	-81.025354
1480	721439	FOX	121	40	2/18/1992	SHALE		DOMESTIC	40.578963	-80.983311
1481	803450	FOX	118	55	3/28/1997	SHALE	23	DOMESTIC	40.577604	-80.976748
1482	643615	FOX	230	80	3/1/1985	SANDSTONE	2		40.576814	-80.970662
1483	641762	FOX	128	58	10/15/1983	SHALE		DOMESTIC	40.578224	-80.965960
1484	671530	FOX	243	94	5/4/1988	SHALE		DOMESTIC	40.580389	-80.966997
1485	2090214	FOX	200	60	12/9/2021	SHALE		DOMESTIC	40.580456	-80.967361
1486	509497	FOX	225	45	10/31/1978	SHALE	40	DOMESTIC	40.580711	-80.966301
1487	602884	FOX	120	35	8/10/1988	SHALE & SANDSTONE	10	DOMESTIC	40.576945	-80.945582
1488	747223	FOX	81	40	9/26/1994	SHALE	4	DOMESTIC	40.576973	-80.943800
1489	747225	FOX	87	46	10/5/1994	SHALE	2	DOMESTIC	40.576614	-80.943282
1490	747224	FOX	102	60	10/5/1994	SHALE	14	DOMESTIC	40.577015	-80.942398
1491	948635	FOX	280	154	10/18/2002	CLAY & SHALE		DOMESTIC	40.617460	-80.952260
1492	143595	FOX	160	75	9/23/1955	SHALE			40.602922	-80.955315
1493	255397	FOX	132	70	12/3/1961	SHALE	55		40.607384	-80.953235
1494	318419	FOX	182	60	11/28/1964	SHALE	137	DOMESTIC	40.607384	-80.953235
1495	318446	FOX	90	40	9/8/1965	SHALE			40.581845	-80.949261
1496	339911	FOX	75	35	10/4/1965	SANDSTONE		DOMESTIC	40.583484	-80.947366
1497	356152	FOX	63	35	9/23/1966	SHALE		DOMESTIC	40.590514	-80.949935
1498	379753	FOX	98	35	5/29/1968	SHALE		DOMESTIC	40.604563	-80.959940
1499	379786	FOX	100	50		SHALE	40		40.615528	-80.951876
1500	473172	FOX	260	140	5/5/1975	SANDSTONE		DOMESTIC	40.612932	-80.952980
1501	491621	FOX	141	65	5/29/1976	SHALE		DOMESTIC	40.604267	-80.954563
1502	635622	FOX	101	48	6/24/1986	SHALE		DOMESTIC	40.590514	-80.949935
1503	757246	FOX	146	75	3/3/1993	SANDSTONE		DOMESTIC	40.586071	-80.948323
1504	598772	FOX	205	130	4/23/1982	SANDSTONE		DOMESTIC	40.613229	-80.953671
1505	626199	FOX	224	158	3/21/1986	CLEANOUT		DOMESTIC	40.615863	-80.951766
1506	795227	FOX	255	220	9/23/1995	SANDSTONE		DOMESTIC	40.616869	-80.952332
1507	573745	FOX	252	150	7/18/1981	CLEANOUT		DOMESTIC	40.616878	-80.951786

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1508	702367	FOX	242	150	10/31/1989	LIMESTONE		DOMESTIC	40.618119	-80.952264
1509	125969	FOX	120	60	10/9/1954	SHALE	55	DOMESTIC	40.575920	-80.956703
1510	379790	FOX	156	75		SANDSTONE		DOMESTIC	40.574881	-80.956472
1511	396673	FOX	188	120		SANDSTONE		DOMESTIC	40.576154	-80.957183
1512	396681	FOX	219	85	5/13/1971	LIMESTONE		DOMESTIC	40.575485	-80.956003
1513	411982	FOX	62	20	4/19/1971	SHALE	3	DOMESTIC	40.577852	-80.960332
1514	427254	FOX	142	90	4/25/1972	SHALE	98	DOMESTIC	40.570977	-80.947641
1515	449835	FOX	140	100	11/17/1973	SHALE	22	DOMESTIC	40.576154	-80.957183
1516	891123	FOX	321	109	12/4/1999	SANDSTONE	143	DOMESTIC	40.570842	-80.946540
1517	803451	FOX	202	130	5/18/1996	SANDSTONE	1	DOMESTIC	40.573215	-80.950936
1518	598778	FOX	87	45	9/24/1982	SHALE		DOMESTIC	40.574896	-80.954319
1519	811424	FOX	88	46	9/15/1999	SHALE	1	DOMESTIC	40.563480	-80.946398
1520	2007768	FOX	250	131	1/12/2007	SANDSTONE	2	AGRIC/IRRIG	40.560472	-80.945206
1521	693792	FOX	152	35	5/9/1989	SANDSTONE	8	DOMESTIC	40.573675	-80.953293
1522	353828	FOX	84	40	5/5/1967	SHALE	46	DOMESTIC	40.606459	-80.944434
1523	491620	FOX	186	135	5/24/1976	SANDSTONE		DOMESTIC	40.617392	-80.949496
1524	522448	FOX	227	145	7/12/1978	SANDSTONE		DOMESTIC	40.617562	-80.951111
1525	2060446	FOX	220	140	12/13/2016	SANDSTONE	10	DOMESTIC	40.605496	-80.944822
1526	942266	FOX	201	125	8/7/2002	SANDSTONE	2	DOMESTIC	40.616070	-80.946950
1527	795236	FOX	85	58	12/10/1996	SANDSTONE		DOMESTIC	40.602335	-80.940360
1528	642386	FOX	198	120	7/11/1988	SHALE	20		40.606620	-80.941207
1529	701252	FOX	250	115	11/10/1989	SANDSTONE			40.606620	-80.941207
1530	1012853	FOX	305	142	5/5/2011	SANDSTONE		DOMESTIC	40.604433	-80.941900
1531	1002416	FOX	240	96	4/19/2006		3	DOMESTIC	40.605377	-80.946612
1532	598798	FOX	79	43	11/30/1983	SHALE	28		40.632707	-80.973804
1533	458318	FOX	60	35	11/17/1973	SHALE		DOMESTIC	40.632112	-80.975689
1534	747186	FOX	138	60	7/6/1992	SHALE		DOMESTIC	40.578096	-80.968448
1535	2041761	FOX	80	20	1/28/2013	SHALE	7	DOMESTIC	40.585280	-80.972800
1536	752298	FOX	146	31	8/8/1992	SHALE	5	DOMESTIC	40.581247	-80.972242
1537	764534	FOX	150	24	11/2/1993	SHALE	3	DOMESTIC	40.584798	-80.974262
1538	2061200	FOX	340	150	2/10/2017	SHALE	7	DOMESTIC	40.584980	-80.974310
1539	909975	FOX	168	40	3/19/2001	SHALE	14	DOMESTIC	40.586300	-80.971530
1540	860201	FOX	200	80	9/5/1997	SHALE	3	DOMESTIC	40.588595	-80.971485
1541	92695	FOX	172	70	10/21/1953	SAND	24	DOMESTIC	40.630904	-80.967711
1542	143751	FOX	49		5/5/1954	SHALE		DOMESTIC	40.619661	-80.970485
1543	160563	FOX	134	65	11/15/1955	SHALE	50		40.630904	-80.967711

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
1544	206079	FOX	62	4	12/17/1957	SHALE	60	DOMESTIC	40.619320	-80.971907
1545	957261	FOX	70	25	2/21/2003	SHALE	2	AGRIC/IRRIG	40.613970	-80.972500
1546	598775	FOX	135	60	6/17/1982	SHALE		DOMESTIC	40.615449	-80.970149
1547	613625	FOX	90	20	11/25/1986	SHALE	38	DOMESTIC	40.617698	-80.972420
1548	942271	FOX	325	29	10/15/2002	SHALE	2	DOMESTIC	40.617030	-80.970430
1549	942272	FOX	325		10/15/2002	SHALE	131	DOMESTIC	40.630710	-80.965600
1550	1006440	FOX	175	10	10/28/2009	SANDSTONE & SHALE	3	DOMESTIC	40.630910	-80.966160
1551	718761	FOX	189	60	8/29/1991	SHALE	6	AGRIC/IRRIG	40.629303	-80.966574
1552	829649	FOX	200	81	4/6/1996	SHALE	3	DOMESTIC	40.627186	-80.960926
1553	92682	FOX	48	20		SHALE	27	DOMESTIC	40.607097	-80.944218
1554	965334	FOX	239	80	5/5/2004	SHALE		DOMESTIC	40.598500	-80.938000
1555	273712	FOX	162	122	6/13/1942	SHALE		DOMESTIC	40.627668	-80.943178
1556	296863	FOX	188	150	9/13/1963	SANDSTONE	48	DOMESTIC	40.626763	-80.950537
1557	390926	FOX	230	100	4/29/1970	SHALE		DOMESTIC	40.622494	-80.951148
1558	550255	FOX	77	35	9/17/1979	SHALE	22	DOMESTIC	40.632394	-80.943226
1559	671892	FOX	208	148	6/18/1990	SANDSTONE	21	DOMESTIC	40.623080	-80.951631
1560	803468	FOX	218	65	11/21/1997	SANDSTONE		DOMESTIC	40.621550	-80.951990
1561	3007292	FOX	250	74	6/24/2021	SANDSTONE		DOMESTIC	40.626860	-80.948450
1562	573750	FOX	239	173	8/27/1981	SHALE		DOMESTIC	40.626763	-80.950537
1563	931780	FOX	264	155	7/7/2001	SANDSTONE		DOMESTIC	40.629440	-80.946940
1564	534195	FOX	198	118	7/28/1980	SANDSTONE		DOMESTIC	40.627668	-80.943178
1565	805713	FOX	260	160	3/28/1995	SANDSTONE	3	DOMESTIC	40.630445	-80.942088
1566	1011740	FOX	125		9/19/2008	SANDSTONE	12	DOMESTIC	40.638170	-80.947740
1567	598762	FOX	74	35	9/2/1981	SHALE	10	DOMESTIC	40.638231	-80.949255
1568	891156	FOX	178	55	11/11/2000	SHALE	2	DOMESTIC	40.632137	-80.943749
1569	2074437	FOX	220	126	7/2/2019	SANDSTONE		DOMESTIC	40.637630	-80.946470
1570	255367	FOX	404			SHELL	24		40.598264	-80.967277
1571	598761	FOX	75	5	8/20/1981	SHALE	26	DOMESTIC	40.597907	-80.976099
1572	671519	FOX	330	111	11/25/1987	SHALE	2	DOMESTIC	40.594788	-80.968076
1573	718771	FOX	161	20	12/6/1991	SHALE	2	DOMESTIC	40.598576	-80.967730
1574	898278	FOX	94	67	10/1/1999	SHALE	14	DOMESTIC	40.598670	-80.967500
1575	795235	FOX	193	140	11/20/1996	SANDSTONE		DOMESTIC	40.602340	-80.965677
1576	747218	FOX	265	50	7/18/1994	SHALE		DOMESTIC	40.601859	-80.945346
1577	877804	FOX	373	174	7/20/1998	SANDSTONE		DOMESTIC	40.600540	-80.950560
1578	1019675	FOX	430	184	12/4/2016	OLD WELL		DOMESTIC	40.598440	-80.943120
1579	803474	FOX	144	70	9/20/1997	SHALE	1	DOMESTIC	40.601120	-80.949660

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
1580	829712	FOX	200	87	5/2/1997	SHALE	2	DOMESTIC	40.603474	-80.944542
1581	611571	FOX	94		1/21/1984	SHALE			40.633094	-80.938300
1582	790961	FOX	75	4	8/23/1994	SANDSTONE	17	DOMESTIC	40.630208	-80.938549
1583	2001848	FOX	185	94	2/16/2006	SANDSTONE		DOMESTIC	40.631820	-80.938360
1584	1012879	FOX	65	10	10/2/2012	SANDSTONE	21	DOMESTIC	40.632267	-80.938483
1585	802792	FOX	200	62	4/27/1995	SHALE	3	DOMESTIC	40.596770	-80.937014
1586	942275	FOX	164	60	9/12/2002	SANDSTONE		DOMESTIC	40.614180	-80.943270
1587	318423	FOX	130	75	12/30/1964	SHALE	12	DOMESTIC	40.568752	-80.956062
1588	3015212	FOX	118	37	5/21/2024	SHALE & SANDSTONE		DOMESTIC	40.571944	-80.956389
1589	799648	FOX	94	50	12/4/1996	SANDSTONE		DOMESTIC	40.575283	-81.068795
1590	909961	FOX	209	108	8/14/2000	SANDSTONE		DOMESTIC	40.614100	-80.975130
1591	550284	FOX	187	100	8/18/1980	SANDSTONE	16		40.614098	-80.974772
1592	635607	FOX	181	73	5/3/1986	LIMESTONE & SHALE	8	DOMESTIC	40.614490	-80.973918
1593	803464	FOX	87	20	11/7/1996	SHALE	16	DOMESTIC	40.616164	-80.971253
1594	1012905	FOX			11/13/2013			DOMESTIC	40.615600	-80.967333
1595	799278	FOX	239	109.5	8/3/1994	SHALE & COAL		DOMESTIC	40.617147	-80.968378
1596	1012928	FOX	385	65	9/2/2014	SANDSTONE		DOMESTIC	40.615250	-80.964333
1597	930573	FOX	237	125	11/27/2001	SANDSTONE	3	DOMESTIC	40.615810	-80.959920
1598	708591	FOX	214	125	3/26/1990	CLEANOUT		DOMESTIC	40.617276	-80.955302
1599	716267	FOX		92	5/30/1991	CLEANOUT		DOMESTIC	40.617359	-80.954939
1600	598777	FOX	230	140	9/20/1982	SANDSTONE	36	DOMESTIC	40.617104	-80.954061
1601	671521	FOX	238	135	12/2/1987	SANDSTONE	195	DOMESTIC	40.617301	-80.954162
1602	635647	FOX	231	156	11/12/1986	OLD WELL			40.618507	-80.951645
1603	747182	FOX		170	5/18/1992	CLEANOUT		DOMESTIC	40.618800	-80.951276
1604	642368	FOX	260		9/20/1986	SHALE	15		40.618931	-80.950758
1605	766967	FOX	257	195	5/26/1993	CLEANOUT		DOMESTIC	40.619137	-80.950290
1606	803463	FOX	216	160	11/27/1996	SANDSTONE		DOMESTIC	40.618372	-80.947935
1607	839432	FOX	203	148	8/8/1996	SANDSTONE	195	DOMESTIC	40.619252	-80.945409
1608	1014641	FOX	198	144	8/28/2011	SANDSTONE		DOMESTIC	40.618467	-80.945533
1609	875616	FOX	223	157.5	7/14/1998	OLD WELL		DOMESTIC	40.616620	-80.956690
1610	826263	FOX	420	135	4/3/1997	SHALE		PUBLIC/SEMI-PUB	40.622730	-80.938680
1611	3006903	FOX	430	137	3/13/2023	EXISTING WELL		PUBLIC/SEMI-PUB	40.619167	-80.938503
1612	411998	FOX	119	55	7/9/1971	SHALE		DOMESTIC	40.588330	-80.942469
1613	909973	FOX	240	46	12/30/2000	SANDSTONE		DOMESTIC	40.588030	-80.942920
1614	721449	FOX	230	140	5/2/1992	SANDSTONE		DOMESTIC	40.585939	-80.942675
1615	23008	HARRISON	122		12/1/1948	SHALE			40.604707	-81.097344

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1616	52698	HARRISON	50		12/16/1949	ROCK	24		40.641934	-81.109086
1617	89162	HARRISON	80	50	8/28/1949	SHALE	65		40.616017	-81.104598
1618	89187	HARRISON	95	50	6/26/1952	SAND			40.619554	-81.145724
1619	213506	HARRISON	110	30	7/28/1958	SAND	20	DOMESTIC	40.614243	-81.152449
1620	432408	HARRISON	44	15	1/27/1972	SHALE	4	DOMESTIC	40.628103	-81.134679
1621	455440	HARRISON	77	55	9/4/1973	SAND	12	DOMESTIC	40.617670	-81.131651
1622	213544	HARRISON	55	55	9/19/1959	SHALE	21	DOMESTIC	40.644026	-81.092855
1623	213546	HARRISON	70	70	9/30/1959	SHALE		DOMESTIC	40.646480	-81.094930
1624	239969	HARRISON	88	30	7/29/1961	SHALE	55	DOMESTIC	40.643031	-81.092196
1625	641781	HARRISON	50	20	10/13/1984	SHALE	30		40.641181	-81.090229
1626	455438	HARRISON	130	60	9/3/1973	SHALE	6	DOMESTIC	40.645309	-81.098849
1627	641785	HARRISON	70	27	5/19/1986	SHALE		DOMESTIC	40.646878	-81.106100
1628	125973	HARRISON	58	20	4/2/1955	SHALE	20	DOMESTIC	40.636024	-81.137919
1629	143581	HARRISON	104	50	8/15/1955	SHALE	30	DOMESTIC	40.613721	-81.151882
1630	143780	HARRISON	95	75	6/26/1954	SAND		DOMESTIC	40.626704	-81.145438
1631	160116	HARRISON	40	8	7/9/1956	SAND		DOMESTIC	40.642020	-81.109631
1632	184976	HARRISON	65	50	9/24/1957	SAND	20	DOMESTIC	40.615223	-81.151466
1633	186949	HARRISON	73	40	7/12/1957	SHALE	42	DOMESTIC	40.614776	-81.150944
1634	206090	HARRISON	140	90	8/31/1958	SANDSTONE	42	DOMESTIC	40.629135	-81.145919
1635	213503	HARRISON	52	20	7/12/1958	SAND		DOMESTIC	40.636024	-81.137919
1636	269312	HARRISON	71	27	10/15/1961	SHALE	20		40.636207	-81.134348
1637	269332	HARRISON	140	80	7/11/1962	SANDSTONE	16		40.637050	-81.140933
1638	325602	HARRISON	72	22	6/17/1966	SAND		DOMESTIC	40.637721	-81.126240
1639	370086	HARRISON	134	67	10/6/1979	SAND			40.639212	-81.120355
1640	370087	HARRISON	128	62	10/6/1979	SHALE & SANDSTONE			40.639204	-81.120351
1641	400734	HARRISON	73	25	6/22/1970	SHALE	4	DOMESTIC	40.614510	-81.152295
1642	405218	HARRISON	104	42	9/24/1970	SHALE	2	DOMESTIC	40.635067	-81.144307
1643	424382	HARRISON	176	81	10/2/1971	SHALE		DOMESTIC	40.637050	-81.140933
1644	424383	HARRISON	31	10	10/9/1971	SANDSTONE		DOMESTIC	40.641884	-81.111410
1645	432414	HARRISON	85	40	4/7/1972	SHALE	4	DOMESTIC	40.616907	-81.148428
1646	455403	HARRISON	148	98	5/7/1973	SANDSTONE	4	DOMESTIC	40.624749	-81.146227
1647	455419	HARRISON	111	60	7/5/1973	SHALE	4	DOMESTIC	40.635619	-81.140930
1648	455425	HARRISON	105	70	7/27/1973	SHALE	4	DOMESTIC	40.621842	-81.146642
1649	464166	HARRISON	96	55	3/31/1974	SAND		DOMESTIC	40.614510	-81.152295
1650	464208	HARRISON	110	84	10/29/1973	SHALE	2	DOMESTIC	40.638219	-81.126651
1651	464225	HARRISON	178	148	4/5/1974	SAND		DOMESTIC	40.617831	-81.149412

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1652	464226	HARRISON	218	178	4/24/1974	SANDSTONE	4	DOMESTIC	40.646032	-81.109614
1653	527986	HARRISON	135	45	6/8/1979	SHALE	48	DOMESTIC	40.623966	-81.144657
1654	527988	HARRISON	81	35	7/14/1979	SANDSTONE		DOMESTIC	40.639765	-81.117766
1655	641751	HARRISON	197	62	5/2/1983	SHALE		DOMESTIC	40.646326	-81.107406
1656	930228	HARRISON	180	119	4/17/2002	CLEANOUT		DOMESTIC	40.613460	-81.152460
1657	860219	HARRISON	200	120	3/25/1998	SANDSTONE	2	DOMESTIC	40.614050	-81.151830
1658	952400	HARRISON	225		12/12/2002	SHALE	2	DOMESTIC	40.610140	-81.151870
1659	721742	HARRISON	125		5/28/1992	SANDSTONE		DOMESTIC	40.608810	-81.150949
1660	924878	HARRISON	95	43	4/3/2003	SANDSTONE	5	DOMESTIC	40.614500	-81.151360
1661	860218	HARRISON	115	50	3/26/1998	SHALE	1	DOMESTIC	40.614790	-81.151050
1662	599277	HARRISON	92	10	6/5/1984	SANDSTONE	6	DOMESTIC	40.615192	-81.151569
1663	464172	HARRISON	145	50	5/6/1974	SHALE	4	DOMESTIC	40.615192	-81.151569
1664	522372	HARRISON	177	92	7/16/1978	SANDSTONE	40	DOMESTIC	40.615422	-81.150173
1665	1012492	HARRISON	203	118	4/17/2010	SANDSTONE		DOMESTIC	40.615280	-81.150020
1666	1016802	HARRISON	256	149	8/13/2015	SHALE		DOMESTIC	40.618283	-81.149600
1667	1016804	HARRISON	15.2	4	8/6/2015	CLAY		SEALED	40.617950	-81.149567
1668	766994	HARRISON	218	151	9/18/1993	SANDSTONE		DOMESTIC	40.619149	-81.149411
1669	799288	HARRISON	262	168	9/20/1994	SANDSTONE	2	DOMESTIC	40.620080	-81.146812
1670	957251	HARRISON	267	185	11/16/2002	SANDSTONE	2	DOMESTIC	40.620880	-81.146800
1671	924886	HARRISON	205	130	10/28/2002	SANDSTONE	6	DOMESTIC	40.622470	-81.145850
1672	693781	HARRISON	108	20	1/2/1990	SANDSTONE	14	DOMESTIC	40.622567	-81.145709
1673	708578	HARRISON	284	171	1/11/1990	SANDSTONE	12	AGRIC/IRRIG	40.623864	-81.144742
1674	1014483	HARRISON	230	150	4/23/2012	SANDSTONE	6	DOMESTIC	40.623353	-81.145885
1675	1019141	HARRISON	235	146	4/13/2019	SANDSTONE		DOMESTIC	40.624411	-81.145713
1676	877459	HARRISON	200	134	11/2/1998	SHALE	4	DOMESTIC	40.623960	-81.145830
1677	877460	HARRISON	200	121	11/2/1998	SHALE	10	DOMESTIC	40.624200	-81.145780
1678	802815	HARRISON	125	60	7/27/1995	SANDSTONE	1	DOMESTIC	40.628183	-81.146277
1679	695842	HARRISON	223	126	7/18/1989	SANDSTONE	6	DOMESTIC	40.628138	-81.146650
1680	877439	HARRISON	200	39	7/25/1998	SANDSTONE	6	DOMESTIC	40.626510	-81.145670
1681	612636	HARRISON	138	84	6/9/1984	COAL		DOMESTIC	40.628658	-81.148138
1682	781613	HARRISON	161	100	5/20/1994	SHALE	4	AGRIC/IRRIG	40.628691	-81.147994
1683	2069506	HARRISON	180	68	7/26/2018	SHALE		DOMESTIC	40.631834	-81.147975
1684	1008081	HARRISON	255	150	11/11/2013	SANDSTONE	5	OTHER	40.624842	-81.145490
1685	598780	HARRISON	219	155	10/12/1982	SAND		DOMESTIC	40.616907	-81.148428
1686	802810	HARRISON	200	128	7/3/1995	SANDSTONE	9	DOMESTIC	40.633275	-81.146918
1687	952387	HARRISON	225		7/31/2003	SANDSTONE	9	DOMESTIC	40.633060	-81.147220

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1688	844753	HARRISON	148	81	10/6/1996	SHALE	9	DOMESTIC	40.633616	-81.145458
1689	464248	HARRISON	98	66	10/21/1975	SANDSTONE	4		40.633613	-81.146603
1690	578659	HARRISON	104	62	10/6/1981	OLD WELL		DOMESTIC	40.635067	-81.144307
1691	671512	HARRISON	159	108	10/31/1987	SHELL		DOMESTIC	40.635308	-81.144341
1692	671511	HARRISON	148	105	10/31/1987	SHALE		DOMESTIC	40.635679	-81.144813
1693	716273	HARRISON	226	154	7/8/1991	CLEANOUT		DOMESTIC	40.636574	-81.144297
1694	799305	HARRISON	176	115	1/25/1995	SHALE		AGRIC/IRRIG	40.636568	-81.144315
1695	799306	HARRISON	207	150	1/25/1995	SANDSTONE	6	DOMESTIC	40.636568	-81.144315
1696	522375	HARRISON	122	70	7/23/1978	SAND	1	DOMESTIC	40.635897	-81.143578
1697	659089	HARRISON	178	118	7/27/1987	SHALE		DOMESTIC	40.635897	-81.143578
1698	891142	HARRISON	219	149	7/15/2000	SANDSTONE	178	DOMESTIC	40.637570	-81.127210
1699	613635	HARRISON	180	135	8/20/1987	SHALE	17	DOMESTIC	40.635431	-81.141775
1700	909962	HARRISON	217	160	8/23/2000	SANDSTONE		DOMESTIC	40.635580	-81.141670
1701	803440	HARRISON	178	130	8/30/1995	SHALE	7	DOMESTIC	40.636462	-81.138545
1702	578685	HARRISON	225	144	4/29/1982	SHALE		DOMESTIC	40.637050	-81.140933
1703	716299	HARRISON	162	122	10/24/1991	SHALE		DOMESTIC	40.636434	-81.140194
1704	781619	HARRISON	187	127	7/3/1994	CLEANOUT		DOMESTIC	40.632463	-81.138473
1705	522382	HARRISON	185	127	8/28/1978	SAND	15	DOMESTIC	40.634204	-81.138143
1706	781585	HARRISON	141	73	11/8/1993	SHALE		AGRIC/IRRIG	40.634500	-81.137894
1707	875649	HARRISON	175	75	12/10/1998	CLAY & SHALE		AGRIC/IRRIG	40.638270	-81.124800
1708	965328	HARRISON	247	145	2/28/2004	SHALE	174	AGRIC/IRRIG	40.638270	-81.124800
1709	370100	HARRISON	151	97	3/16/1980	SHALE & SANDSTONE	1	DOMESTIC	40.636207	-81.134348
1710	476230	HARRISON	100	40	7/4/1975	SHALE		DOMESTIC	40.636207	-81.134348
1711	877340	HARRISON	225	100	7/2/1998	SHALE	6	DOMESTIC	40.639770	-81.119740
1712	934578	HARRISON	200	18	11/30/2001	SHALE	19	AGRIC/IRRIG	40.639790	-81.119640
1713	861087	HARRISON	174	120	8/21/1998	SHALE	9	DOMESTIC	40.639830	-81.119430
1714	829710	HARRISON	200	69	3/22/1997	SANDSTONE	3	DOMESTIC	40.638593	-81.125682
1715	2029300	HARRISON	100	32	9/16/2010	SANDSTONE	16	DOMESTIC	40.639467	-81.125817
1716	2032139	HARRISON	65	38	4/29/2011	SANDSTONE	12	DOMESTIC	40.638850	-81.125083
1717	844372	HARRISON	93	26	8/8/1997	SANDSTONE	9	DOMESTIC	40.639252	-81.123693
1718	2053226	HARRISON	279	153	7/27/2015	COAL		MONITOR	40.637472	-81.119333
1719	2053227	HARRISON	119	92	7/27/2015	SANDSTONE		MONITOR	40.637444	-81.119306
1720	2053228	HARRISON	219	140	7/28/2015	SANDSTONE & SHALE		MONITOR	40.637472	-81.119250
1721	370085	HARRISON	103	39	9/26/1979	SAND	20	DOMESTIC	40.639416	-81.119505
1722	716293	HARRISON	103	43	9/14/1991	SHALE		DOMESTIC	40.639758	-81.118530
1723	530785	HARRISON	100	40	8/19/1978	SANDSTONE			40.639803	-81.116794

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
1724	598760	HARRISON	143		7/28/1981	SHALE	131	DOMESTIC	40.641600	-81.114426
1725	766990	HARRISON	59	4	9/10/1993	SANDSTONE	44	DOMESTIC	40.642964	-81.112278
1726	679103	HARRISON	69	7	7/11/1988	SHALE	52	DOMESTIC	40.642017	-81.111094
1727	641753	HARRISON	178	104	5/27/1983	SHALE		DOMESTIC	40.643281	-81.106531
1728	638406	HARRISON	200	122	6/27/1983	SHALE		DOMESTIC	40.644768	-81.107050
1729	213547	HARRISON	69	20	10/15/1959	SHALE	16	DOMESTIC	40.610826	-81.134011
1730	289163	HARRISON	164	110	7/22/1967	SANDSTONE			40.607346	-81.131430
1731	296874	HARRISON	195	145	12/2/1963	SHALE	18	DOMESTIC	40.616194	-81.140289
1732	328239	HARRISON	72	40	6/6/1966	SANDSTONE	21	DOMESTIC	40.601951	-81.122451
1733	372038	HARRISON	90	41	8/17/1968	SAND		DOMESTIC	40.610710	-81.134150
1734	432449	HARRISON	46	24	8/22/1972	SANDSTONE	4	DOMESTIC	40.601042	-81.120690
1735	443612	HARRISON	72	30		SHALE & SANDSTONE		DOMESTIC	40.601042	-81.120690
1736	443613	HARRISON	52	20	9/21/1972	SHALE	32	DOMESTIC	40.600786	-81.119984
1737	458334	HARRISON	65	10	6/19/1974	SHALE	15		40.605908	-81.128774
1738	464222	HARRISON	81	30	3/12/1974	SHALE	10	DOMESTIC	40.606138	-81.129449
1739	568401	HARRISON	225	160	6/20/1980	SHALE	3	DOMESTIC	40.605482	-81.128233
1740	708580	HARRISON	133	85	1/22/1990	SHALE	16	DOMESTIC	40.595915	-81.095983
1741	1006077	HARRISON	57	39	11/9/2007	SANDSTONE	5	DOMESTIC	40.597091	-81.113184
1742	875611	HARRISON	162	63	6/24/1998	SHALE	6	DOMESTIC	40.601900	-81.121280
1743	601506	HARRISON	78	25	6/15/1981	SHALE	20	DOMESTIC	40.601692	-81.121388
1744	844772	HARRISON	143	90	1/22/1998	SANDSTONE	24	DOMESTIC	40.602110	-81.121740
1745	875602	HARRISON	163	90	4/15/1998	SHALE		DOMESTIC	40.602380	-81.122340
1746	965325	HARRISON	210	136	2/2/2004	LIMESTONE	5	DOMESTIC	40.603000	-81.126670
1747	963551	HARRISON	80	41	9/15/2006	SANDSTONE	5	DOMESTIC	40.602890	-81.124070
1748	693800	HARRISON	223	138	5/9/1990	SANDSTONE	6	DOMESTIC	40.605804	-81.128574
1749	650378	HARRISON	232	128	1/27/1988	SANDSTONE	11		40.606566	-81.131345
1750	712616	HARRISON	272	122	9/21/1990	SHALE	6	PUBLIC/SEMI-PUB	40.604380	-81.144960
1751	712617	HARRISON	260	125	9/21/1990	SHALE		PUBLIC/SEMI-PUB	40.606409	-81.131062
1752	712618	HARRISON	275		9/21/1990	SANDSTONE	7	PUBLIC/SEMI-PUB	40.606409	-81.131062
1753	750777	HARRISON	225	105	1/15/1993	COAL	17	PUBLIC/SEMI-PUB	40.606409	-81.131062
1754	825435	HARRISON	180	112	5/15/1996	SHALE	1	DOMESTIC	40.606409	-81.131062
1755	687960	HARRISON	55	32	12/23/1988	SHALE	6	DOMESTIC	40.610282	-81.131983
1756	687851	HARRISON	70	30	8/30/1988	SHALE		DOMESTIC	40.609857	-81.132598
1757	1007091	HARRISON	165	73	10/22/2008	SANDSTONE	1	DOMESTIC	40.610950	-81.137017
1758	2073052	HARRISON	240	150	4/18/2019	SANDSTONE	5	DOMESTIC	40.611000	-81.133987
1759	1014647	HARRISON	198	137	11/8/2011			DOMESTIC	40.616300	-81.140433

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
1760	2074563	HARRISON	286	180	7/9/2019	SANDSTONE	8	DOMESTIC	40.618833	-81.140333
1761	989219	HARRISON	330	221	10/31/2005	SANDSTONE	4	DOMESTIC	40.620300	-81.146110
1762	802753	HARRISON	200	84	10/26/1994	SANDSTONE	6	DOMESTIC	40.620604	-81.145899
1763	940735	HARRISON	300	195	8/2/2002	EXISTING WELL		DOMESTIC	40.620690	-81.145960
1764	866803	HARRISON	247	50	11/7/1998	SHALE		DOMESTIC	40.620670	-81.146330
1765	781599	HARRISON	284	180	1/21/1994	SANDSTONE		DOMESTIC	40.621085	-81.145944
1766	599261	HARRISON	75	25	4/23/1982	SANDSTONE	3	DOMESTIC	40.647042	-81.144406
1767	1006067	HARRISON	90	28	7/10/2007	SANDSTONE	26	DOMESTIC	40.646533	-81.143583
1768	370090	HARRISON	75	5	10/25/1979	SHALE	6	DOMESTIC	40.643959	-81.146638
1769	877502	HARRISON	100	26	5/15/1999	SHALE		DOMESTIC	40.643680	-81.150090
1770	125952	HARRISON	54	20	5/22/1954	SHALE	40	DOMESTIC	40.638053	-81.152897
1771	335295	HARRISON	65	23	3/21/1966	SANDSTONE	5		40.642137	-81.151110
1772	976708	HARRISON	218	150	8/11/2004	SHALE		DOMESTIC	40.633490	-81.147720
1773	942159	HARRISON	180	122	7/10/2002	SHALE		DOMESTIC	40.634170	-81.154440
1774	904437	HARRISON	145	81	7/19/2000	SANDSTONE		DOMESTIC	40.633950	-81.149790
1775	942251	HARRISON	156	108	2/16/2002	SANDSTONE	1	DOMESTIC	40.634480	-81.150970
1776	671529	HARRISON	298	184	2/20/1988	SHALE	14	DOMESTIC	40.636719	-81.149778
1777	3008628	HARRISON	98	50	6/28/2023	SANDSTONE	7	DOMESTIC	40.636640	-81.149860
1778	934595	HARRISON	56	20	10/28/2003	SAND	8	DOMESTIC	40.637666	-81.139166
1779	2086426	HARRISON	200	70	6/3/2021	SANDSTONE & SHALE	59	DOMESTIC	40.644341	-81.151207
1780	2065596	HARRISON	198	152	11/15/2017	SANDSTONE	1	DOMESTIC	40.640667	-81.154333
1781	400719	HARRISON	65	15	3/30/1970	SHALE	40	DOMESTIC	40.592080	-81.116607
1782	411958	HARRISON	50	12	9/14/1970	SAND	35	DOMESTIC	40.591682	-81.118362
1783	772466	HARRISON	45	8	12/1/1993	SANDSTONE	20	DOMESTIC	40.575969	-81.121266
1784	829654	HARRISON	60	12	6/10/1996	ROCK	30	DOMESTIC	40.583571	-81.121978
1785	965313	HARRISON	64	16	10/22/2003	SANDSTONE	39	DOMESTIC	40.583500	-81.131666
1786	987614	HARRISON	75	27	9/13/2005		8	DOMESTIC	40.584830	-81.121000
1787	2045499	HARRISON	150		11/5/2013	SHALE & SANDSTONE	5	HEATING/COOLING	40.582850	-81.116840
1788	883334	HARRISON	190	85	8/15/2000	SANDSTONE	4	DOMESTIC	40.590500	-81.115830
1789	1015648	HARRISON	55	5	1/15/2016	SHALE	40	AGRIC/IRRIG	40.592022	-81.117922
1790	813056	HARRISON	102	80	11/6/1995	SANDSTONE		DOMESTIC	40.596472	-81.118147
1791	930219	HARRISON	119	22	11/16/2001	SHALE		DOMESTIC	40.596380	-81.115290
1792	89156	HARRISON	66	30	6/23/1949	SHALE			40.616367	-81.104590
1793	92678	HARRISON	124	75		SAND			40.608240	-81.096120
1794	95393	HARRISON	202	5	6/18/1956	LIMESTONE	68	COMMERCIAL	40.634320	-81.112333
1795	103421	HARRISON	137	25	8/6/1953	SHALE	75	DOMESTIC	40.618067	-81.103239

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1796	125976	HARRISON	92	50	5/1/1955	SHALE	12	DOMESTIC	40.606548	-81.096059
1797	143558	HARRISON	129	85	11/13/1954	SHALE			40.612839	-81.099541
1798	143565	HARRISON	92	50	5/4/1955	SHALE	40	DOMESTIC	40.619718	-81.103301
1799	160120	HARRISON	48	28	7/28/1956	SHALE		DOMESTIC	40.609436	-81.097733
1800	160571	HARRISON	46	12	1/30/1956	GRAVEL		DOMESTIC	40.639444	-81.115701
1801	184984	HARRISON	114	40	11/28/1957	SHALE		DOMESTIC	40.618067	-81.103239
1802	202488	HARRISON	32		5/22/1958	SHALE	20		40.641983	-81.115659
1803	206072	HARRISON	136	84	10/31/1957	SHALE		DOMESTIC	40.613285	-81.100433
1804	223153	HARRISON	160	35		SANDSTONE	84	DOMESTIC	40.608801	-81.096927
1805	223158	HARRISON	230	150	10/8/1958	SHALE		DOMESTIC	40.611515	-81.099424
1806	225911	HARRISON	202	152	11/24/1958	COAL	3	DOMESTIC	40.618296	-81.103909
1807	255355	HARRISON	158	50		SHALE		DOMESTIC	40.623285	-81.097365
1808	289174	HARRISON	49		11/13/1963	SANDSTONE	46	DOMESTIC	40.640708	-81.114121
1809	318432	HARRISON	187	150	5/6/1965	SANDSTONE		DOMESTIC	40.618164	-81.103113
1810	356163	HARRISON	59		2/23/1967	SAND		DOMESTIC	40.641714	-81.115686
1811	372802	HARRISON	110	45	10/25/1967	SANDSTONE	7	DOMESTIC	40.637274	-81.113707
1812	372845	HARRISON	74	30	7/3/1968	SHALE	2	DOMESTIC	40.637274	-81.113707
1813	387871	HARRISON	125	140	4/14/1969	CORED			40.618164	-81.103113
1814	387892	HARRISON	180	29	8/12/1969	SAND		DOMESTIC	40.611571	-81.101505
1815	387900	HARRISON	233	158	9/19/1969	SAND			40.611195	-81.100995
1816	432403	HARRISON	220	160	12/3/1971	SHALE		DOMESTIC	40.613285	-81.100433
1817	432443	HARRISON	210	94	8/8/1972	SHALE	5	DOMESTIC	40.625118	-81.106097
1818	443616	HARRISON	225	125	10/6/1972	SHALE		DOMESTIC	40.623592	-81.104381
1819	464199	HARRISON	210	145	9/10/1974	SHALE		DOMESTIC	40.611571	-81.101505
1820	464213	HARRISON	150	110	1/7/1974	SHALE		DOMESTIC	40.623047	-81.104166
1821	464238	HARRISON	210	115	8/5/1974	SANDSTONE		DOMESTIC	40.612455	-81.099157
1822	464249	HARRISON	223	163	10/29/1974	SANDSTONE	5		40.610987	-81.100126
1823	507577	HARRISON	90	35	8/29/1978	SANDSTONE	7	DOMESTIC	40.635423	-81.116367
1824	573716	HARRISON	113	70	11/25/1980	SHALE	4	DOMESTIC	40.634555	-81.115997
1825	609587	HARRISON	193	126	4/4/1985	SHALE	25	DOMESTIC	40.603954	-81.096068
1826	615935	HARRISON	96	35	1/31/1986	ROCK	24	DOMESTIC	40.616620	-81.101981
1827	799312	HARRISON	245	159	4/1/1995	SHALE	194		40.604310	-81.095598
1828	987619	HARRISON	248	171	11/3/2005		4	DOMESTIC	40.604670	-81.096830
1829	659081	HARRISON	238	172	6/30/1987	SHALE		DOMESTIC	40.604445	-81.095799
1830	708579	HARRISON	254	132	1/11/1990	SHALE	12	DOMESTIC	40.609368	-81.097412
1831	1019124	HARRISON	167	134	11/28/2017	UNKNOWN		DOMESTIC	40.609536	-81.097755

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1832	534179	HARRISON	198	148	11/8/1979	COAL	5	DOMESTIC	40.609810	-81.098695
1833	716253	HARRISON	217	154	12/6/1990	OLD WELL			40.610906	-81.099122
1834	671540	HARRISON	229	166	5/23/1988	SHALE			40.611235	-81.100342
1835	932893	HARRISON	175	50	6/10/2002	SHALE	5	DOMESTIC	40.611130	-81.099300
1836	1014657	HARRISON	326	122	5/25/2012	SANDSTONE		DOMESTIC	40.612017	-81.101350
1837	568504	HARRISON	234	130	7/5/1988	SHALE	7		40.614446	-81.102711
1838	613650	HARRISON	234	130	7/5/1988	SHALE	7		40.614443	-81.102699
1839	803437	HARRISON	285	160	5/23/1995	SHALE	16	DOMESTIC	40.615148	-81.102539
1840	641786	HARRISON	187	140	3/24/1987	SANDSTONE	2	DOMESTIC	40.617608	-81.104096
1841	716286	HARRISON	208	159	8/24/1991	SHALE		DOMESTIC	40.618461	-81.102879
1842	1008085	HARRISON	250	13.3	9/28/2022	SANDSTONE	7	DOMESTIC	40.615827	-81.104337
1843	2067192	HARRISON	300	147	3/12/2018	SHALE		DOMESTIC	40.620850	-81.103910
1844	2056083	HARRISON	268	132	1/17/2016	SHALE		DOMESTIC	40.617333	-81.102667
1845	635643	HARRISON	209	123	9/27/1986	SHALE	3	DOMESTIC	40.619445	-81.102990
1846	1008252	HARRISON	143	47	7/10/2009	LIMESTONE		DOMESTIC	40.623330	-81.104720
1847	924853	HARRISON	330	116	5/29/2001	SHALE	4	DOMESTIC	40.625100	-81.105260
1848	500311	HARRISON	217	140	9/22/1976	SHALE		DOMESTIC	40.616620	-81.101981
1849	612615	HARRISON	185	124	8/28/1983	OLD WELL		DOMESTIC	40.616620	-81.101981
1850	839456	HARRISON	195	113	12/17/1996	SHALE		AGRIC/IRRIG	40.623451	-81.097755
1851	514527	HARRISON	210	120	9/13/1977	LIMESTONE		DOMESTIC	40.623047	-81.104166
1852	578678	HARRISON	225	125	10/6/1972	SHALE		DOMESTIC	40.623592	-81.104381
1853	659068	HARRISON	210	100	3/21/1987	OLD WELL		DOMESTIC	40.625118	-81.106097
1854	1015644	HARRISON	85	49	4/25/2016	SANDSTONE	1	AGRIC/IRRIG	40.627550	-81.097810
1855	858913	HARRISON	100	24	8/28/1997	SANDSTONE	20	DOMESTIC	40.630140	-81.108604
1856	902189	HARRISON	200	38	10/7/1999	SANDSTONE		DOMESTIC	40.627220	-81.106720
1857	1008225	HARRISON	195	99	6/7/2008	LIMESTONE & SHALE		DOMESTIC	40.627000	-81.106333
1858	659097	HARRISON	83	18	9/1/1987	SANDSTONE	24	DOMESTIC	40.634476	-81.113425
1859	894263	HARRISON	200	40	9/9/1999	SANDSTONE	8	DOMESTIC	40.639260	-81.115230
1860	819119	HARRISON	140	10	10/17/1995	SHALE	18	DOMESTIC	40.634978	-81.112601
1861	599268	HARRISON	82	30	9/2/1982	SHALE	25	DOMESTIC	40.635423	-81.116367
1862	493712	HARRISON	81	29	6/24/1976	SANDSTONE	27		40.640089	-81.115979
1863	799299	HARRISON	103	58.5	11/22/1994	SHALE	10	DOMESTIC	40.638520	-81.115786
1864	1016777	HARRISON	100	33	12/19/2012	SANDSTONE	4	DOMESTIC	40.639800	-81.115917
1865	465922	HARRISON	63		11/27/1973	GRAVEL		DOMESTIC	40.641600	-81.114426
1866	891144	HARRISON	107	5	8/11/2000	COAL	85	DOMESTIC	40.641109	-81.117480
1867	635617	HARRISON	53	18	6/14/1986	OLD WELL		DOMESTIC	40.642631	-81.118046

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1868	1021447	HARRISON	284	34	10/10/2022	SANDSTONE		PUBLIC/SEMI-PUB	40.646567	-81.119700
1869	803461	HARRISON	229	165	10/1/1996	SHALE	5	DOMESTIC	40.612305	-81.097910
1870	882631	HARRISON	110	60	6/29/1999	SANDSTONE		DOMESTIC	40.618002	-80.998623
1871	671864	HARRISON	312	100	10/8/1988	SHALE			40.577706	-81.134093
1872	930235	HARRISON	223	74	6/24/2002	SANDSTONE/SHALE/LIME	2	DOMESTIC	40.576170	-81.137220
1873	1014482	HARRISON	155	40	6/14/2012	SANDSTONE	4	DOMESTIC	40.576933	-81.132833
1874	752785	HARRISON	218	130	8/26/1992	SHALE		DOMESTIC	40.574198	-81.134919
1875	387864	HARRISON	174	135	2/1/1969	SHALE		DOMESTIC	40.591880	-81.132774
1876	424395	HARRISON	159	132	11/5/1971	SHALE		DOMESTIC	40.591880	-81.132774
1877	692836	HARRISON	180	83	7/26/1990	SHALE	10	DOMESTIC	40.585974	-81.120792
1878	799303	HARRISON	43	23.5	1/9/1995	SANDSTONE	14	DOMESTIC	40.588582	-81.121085
1879	522423	HARRISON	128	76	10/10/1977	SHALE		DOMESTIC	40.589542	-81.129102
1880	955611	HARRISON	145	43	5/15/2003	SHALE	8	DOMESTIC	40.585330	-81.124000
1881	747638	HARRISON	98	40	8/20/1993	SANDSTONE	4	DOMESTIC	40.587589	-81.124391
1882	1006085	HARRISON	170	74	10/20/2007	SANDSTONE & SHALE	16	DOMESTIC	40.587867	-81.125500
1883	830424	HARRISON	280	65	7/8/1996	SHALE		DOMESTIC	40.589230	-81.125134
1884	803462	HARRISON	91	50	10/7/1996	SANDSTONE	2	DOMESTIC	40.588828	-81.127615
1885	679131	HARRISON	290	158	10/24/1988	SHALE			40.591698	-81.133003
1886	891104	HARRISON	250	168	8/14/1999	SHALE	176	DOMESTIC	40.592410	-81.132990
1887	930221	HARRISON	255	170.5	12/6/2001	SANDSTONE	1	AGRIC/IRRIG	40.592410	-81.132990
1888	125991	HARRISON	58	30	7/13/1955	SAND		DOMESTIC	40.604735	-81.105283
1889	394365	HARRISON	78	40	3/24/1970	SAND	17	DOMESTIC	40.601046	-81.110823
1890	455443	HARRISON	118	75	9/11/1973	SHALE	4	DOMESTIC	40.604453	-81.100522
1891	932496	HARRISON	121	45	4/10/2002	SHALE	22	DOMESTIC	40.609440	-81.091670
1892	952371	HARRISON	150		3/14/2003	LOAM	1	DOMESTIC	40.605190	-81.102990
1893	2070529	HARRISON	150	53	10/15/2018	SHALE		DOMESTIC	40.605717	-81.092431
1894	751137	HARRISON	115	25	6/15/1993	SHELL	27	DOMESTIC	40.603970	-81.089527
1895	608849	HARRISON	479	145	7/20/1984	SANDSTONE			40.605770	-81.095254
1896	464207	HARRISON	198	115	10/22/1973	SANDSTONE	3	DOMESTIC	40.607193	-81.094609
1897	522390	HARRISON	320	175	9/28/1978	SHALE	6	DOMESTIC	40.607193	-81.094609
1898	751141	HARRISON	120	75	9/28/1993	SHELL	3	DOMESTIC	40.608837	-81.086437
1899	987594	HARRISON	220	166	4/18/2005			DOMESTIC	40.602600	-81.109010
1900	766952	HARRISON	81	42	2/8/1993	CLEANOUT		DOMESTIC	40.605537	-81.102707
1901	642355	HARRISON	61	20	7/28/1985	SHALE		DOMESTIC	40.599127	-81.111284
1902	125951	HARRISON	89	20	5/22/1954	SAND	30	DOMESTIC	40.605636	-81.149708
1903	143554	HARRISON	53	20	10/16/1954	SHALE	48	DOMESTIC	40.602921	-81.147065

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
1904	514541	HARRISON	150	95	12/18/1977	SHALE	20		40.603963	-81.141503
1905	955644	HARRISON	180	99	10/25/2003			DOMESTIC	40.604180	-81.141990
1906	781605	HARRISON	106	47	6/24/1994	SANDSTONE		DOMESTIC	40.606292	-81.150590
1907	522366	HARRISON	121	30	6/13/1978	SAND	6	DOMESTIC	40.608820	-81.145383
1908	601519	HARRISON	95	65	10/13/1991	SANDSTONE	4	DOMESTIC	40.609081	-81.146575
1909	554771	HARRISON	237	161	8/25/1984	SHALE		DOMESTIC	40.615835	-81.143338
1910	477493	HARRISON	114	62	5/4/1976	SHALE	8	DOMESTIC	40.615835	-81.143338
1911	89196	HARRISON	106	60	9/9/1952	SHALE	18		40.593154	-81.126294
1912	184995	HARRISON	48	20	6/7/1958	SHALE	40	DOMESTIC	40.598404	-81.125800
1913	213531	HARRISON	38	7	5/23/1959	SHALE	30	DOMESTIC	40.604410	-81.130109
1914	370065	HARRISON	210	130	6/4/1979	SHALE	4	DOMESTIC	40.586656	-81.131232
1915	509492	HARRISON	212	170	7/17/1978	SHALE	40	DOMESTIC	40.602080	-81.129080
1916	514523	HARRISON	225	145	8/9/1977	SHALE	3	DOMESTIC	40.602695	-81.128905
1917	643601	HARRISON	310	182	10/8/1984	SHALE	3	DOMESTIC	40.579888	-81.131462
1918	930237	HARRISON	283	98	7/6/2002	SHALE & LIMESTONE	1	DOMESTIC	40.588520	-81.130500
1919	802768	HARRISON	200	55	12/17/1994	SHALE	6	DOMESTIC	40.583114	-81.131453
1920	1019869	HARRISON	255	130	10/28/2018	SANDSTONE	4	DOMESTIC	40.579261	-81.131410
1921	894281	HARRISON	305	135	8/2/2000	SANDSTONE	1	DOMESTIC	40.580910	-81.130910
1922	902190	HARRISON	250	71	10/11/1999	SHALE	2	DOMESTIC	40.579790	-81.130560
1923	1012496	HARRISON	199	119	3/13/2010	SHALE		DOMESTIC	40.588960	-81.129960
1924	716252	HARRISON	144	56	11/30/1990	SILTSTONE	20	DOMESTIC	40.596945	-81.125325
1925	716338	HARRISON	396	115	1/20/1992	SHALE	12	DOMESTIC	40.599284	-81.129158
1926	1021453	HARRISON	315	141	10/20/2022	SANDSTONE	6	DOMESTIC	40.599536	-81.129511
1927	829664	HARRISON	275	176	7/25/1996	SANDSTONE	5	DOMESTIC	40.595311	-81.128506
1928	601540	HARRISON	264		9/28/1982	SANDSTONE	8		40.601314	-81.128966
1929	601537	HARRISON	226	74	8/16/1982	SANDSTONE	15	DOMESTIC	40.603265	-81.129088
1930	770058	HARRISON	235	162	9/1/1993	SHALE & SANDSTONE	17	DOMESTIC	40.603507	-81.130072
1931	601767	HARRISON	142	175	6/16/1984	LIMESTONE		DOMESTIC	40.603967	-81.129045
1932	874628	HARRISON	261	150	4/2/1998	SANDSTONE	17	DOMESTIC	40.601790	-81.129460
1933	894063	HARRISON	129	30	6/22/1999	SANDSTONE	15	DOMESTIC	40.601790	-81.129460
1934	942186	HARRISON	248	180	7/17/2003	CLEANOUT	224	DOMESTIC	40.623060	-81.146940
1935	643609	HARRISON	250		11/16/1984	OLD WELL		DOMESTIC	40.621025	-81.144296
1936	184978	HARRISON	65	20	10/2/1957	SHALE	12	DOMESTIC	40.607741	-81.124710
1937	474180	HARRISON	95	30	5/23/1975	SHALE	28	DOMESTIC	40.608047	-81.126077
1938	922460	HARRISON	200	137	4/11/2001	LOAM	5	DOMESTIC	40.604506	-81.125889
1939	829716	HARRISON	250	138	5/23/1997	SHALE	2	AGRIC/IRRIG	40.609853	-81.124384

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
1940	522396	HARRISON	224	165	11/5/1978	SAND	2	DOMESTIC	40.605958	-81.126633
1941	671889	HARRISON	220	155	5/12/1990	SANDSTONE		DOMESTIC	40.605915	-81.126048
1942	764543	HARRISON	225	121	12/9/1993	SANDSTONE	9	DOMESTIC	40.606954	-81.124222
1943	764531	HARRISON	225	148	10/2/1993	SANDSTONE	8	DOMESTIC	40.607388	-81.124589
1944	716301	HARRISON	246	139	6/26/1990	CORED		DOMESTIC	40.607940	-81.126120
1945	857679	HARRISON	87	17	12/31/1998	SHELL	19	DOMESTIC	40.609930	-81.124370
1946	932499	HARRISON	235	146	9/15/2001	SANDSTONE		DOMESTIC	40.610040	-81.124710
1947	952399	HARRISON	200		12/4/2002	SANDSTONE & SHALE	7	DOMESTIC	40.610010	-81.124360
1948	955634	HARRISON	235	129	6/10/2005	SANDSTONE	6	DOMESTIC	40.610070	-81.124340
1949	928782	HARRISON	225	150	7/6/2002	SANDSTONE	10	DOMESTIC	40.610330	-81.118300
1950	799319	HARRISON	177	118	6/2/1995	SANDSTONE	26	DOMESTIC	40.614020	-81.123599
1951	891118	HARRISON	192	138	11/13/1999	SHALE	2	DOMESTIC	40.619790	-81.124660
1952	1019127	HARRISON	92	44	1/19/2018	SHALE		DOMESTIC	40.622580	-81.125550
1953	3003843	HARRISON	58	20	10/4/2022	SANDSTONE		DOMESTIC	40.624637	-81.123647
1954	844924	HARRISON	80	15	4/22/1997	SHALE	38	DOMESTIC	40.625182	-81.120805
1955	2010528	HARRISON	180	87	6/22/2007	SHALE		DOMESTIC	40.626817	-81.118533
1956	2068076	HARRISON	178	118	5/24/2018	SHALE		DOMESTIC	40.627837	-81.125870
1957	987596	HARRISON	134	33	5/19/2005			DOMESTIC	40.629210	-81.123148
1958	573748	HARRISON	70	25	8/24/1981	SANDSTONE	4	DOMESTIC	40.633355	-81.114695
1959	143580	HARRISON	57	28	7/8/1955	SANDSTONE	36	DOMESTIC	40.626895	-81.136757
1960	160131	HARRISON	146	50	10/18/1956	SHALE		DOMESTIC	40.641065	-81.103623
1961	339906	HARRISON	60	12		SHELL	24	DOMESTIC	40.630286	-81.121281
1962	534154	HARRISON	51	13	10/30/1978	SANDSTONE	18	DOMESTIC	40.633885	-81.113616
1963	716254	HARRISON	201	35	12/20/1990	SHALE	126	DOMESTIC	40.633438	-81.113048
1964	802787	HARRISON	81	1	4/25/1995	ROCK	40	DOMESTIC	40.632426	-81.115500
1965	2086509	HARRISON	160	22	6/8/2021	SHALE	81	DOMESTIC	40.632402	-81.115537
1966	849736	HARRISON	92	15	10/13/1997	CLAY & SHALE	81	DOMESTIC	40.632620	-81.115400
1967	2045151	HARRISON	90	19	10/10/2013	SHALE	62	DOMESTIC	40.632500	-81.114444
1968	716346	HARRISON	173	12	3/28/1992	SANDSTONE	90	DOMESTIC	40.631532	-81.118165
1969	1008079	HARRISON	170	130	10/25/2013	SANDSTONE	5	DOMESTIC	40.632716	-81.119296
1970	981445	HARRISON	130	65	9/19/2006	SHALE	11	DOMESTIC	40.631270	-81.123920
1971	839431	HARRISON	144	59	8/2/1996	SHALE	2	DOMESTIC	40.631941	-81.123374
1972	955620	HARRISON	117	20	10/9/2006	SHALE	13	DOMESTIC	40.633667	-81.124500
1973	766966	HARRISON	115	30	5/23/1993	SANDSTONE	26	DOMESTIC	40.631981	-81.126172
1974	891121	HARRISON	133	28	12/1/1999	SANDSTONE	23	DOMESTIC	40.631203	-81.127618
1975	891103	HARRISON	213	99	8/6/1999	SANDSTONE	9	AGRIC/IRRIG	40.627210	-81.141770

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1976	1014645	HARRISON	257	156	10/14/2011	SANDSTONE		AGRIC/IRRIG	40.626833	-81.144033
1977	1021948	HARRISON	160	22	6/6/2021	SHALE	81	DOMESTIC	40.632402	-81.115537
1978	841902	HARRISON	348	174	9/16/1996	SHALE		DOMESTIC	40.634600	-81.086192
1979	930229	HARRISON	254	131	4/20/2002	SHALE		DOMESTIC	40.641650	-81.090880
1980	877488	HARRISON	200		4/2/1999	SHALE	15	DOMESTIC	40.647710	-81.095320
1981	1012471	HARRISON	165	99	8/10/2009	SANDSTONE	2	DOMESTIC	40.642860	-81.092260
1982	599372	HARRISON	148	89	9/26/1981	SHALE		DOMESTIC	40.646163	-81.094040
1983	934586	HARRISON	223	187	12/29/2002	SHALE	30	DOMESTIC	40.638500	-81.102830
1984	160103	HARRISON	144	55	9/15/1955	SHALE		DOMESTIC	40.646701	-81.104662
1985	455429	HARRISON	120	70	8/14/1973	SHALE	4	DOMESTIC	40.639762	-81.103271
1986	507567	HARRISON	85	30	5/3/1978	CLAY & SHALE		DOMESTIC	40.633107	-81.108486
1987	522386	HARRISON	72	15	9/13/1978	SANDSTONE	62	DOMESTIC	40.633612	-81.107375
1988	641758	HARRISON	200	39	9/6/1983	SHALE		DOMESTIC	40.645306	-81.104676
1989	522674	HARRISON	70	18	8/26/1978	SHALE	30	DOMESTIC	40.633822	-81.108471
1990	938993	HARRISON	200	67	12/31/2002	SANDSTONE & SHALE	3	DOMESTIC	40.636560	-81.104830
1991	858522	HARRISON	194	15	10/4/1997	SHALE	18	DOMESTIC	40.636567	-81.104941
1992	839472	HARRISON	103	27.5	6/26/1997	SANDSTONE	2	DOMESTIC	40.636937	-81.104099
1993	799281	HARRISON	67	42	8/20/1994	OLD WELL		DOMESTIC	40.637184	-81.103904
1994	695827	HARRISON	166	80	4/10/1989	SHALE	8	DOMESTIC	40.637868	-81.103329
1995	737623	HARRISON	163	65.5	6/8/1992	SHALE	4	DOMESTIC	40.638323	-81.100587
1996	955890	HARRISON	142	81	10/6/2003	SHALE	9	DOMESTIC	40.638320	-81.103930
1997	3001959	HARRISON	179	73	7/9/2022	SHALE		DOMESTIC	40.638889	-81.101667
1998	883731	HARRISON	303	118	9/24/1998	SANDSTONE	2	DOMESTIC	40.640500	-81.103790
1999	940723	HARRISON	275	98	5/10/2002	LOAM	2	DOMESTIC	40.640840	-81.103830
2000	679140	HARRISON	224	84	12/3/1988	SHALE	10	DOMESTIC	40.640170	-81.104577
2001	643618	HARRISON	208	123	4/6/1985	SANDSTONE		DOMESTIC	40.640412	-81.105977
2002	522438	HARRISON	185	101	4/28/1978	SHALE		DOMESTIC	40.640552	-81.103319
2003	955622	HARRISON	225	108	3/8/2007	SHALE		DOMESTIC	40.642090	-81.104130
2004	629946	HARRISON	197	139	10/23/1994	SHALE		DOMESTIC	40.643481	-81.104544
2005	875620	HARRISON	200	154	8/15/1998	OLD WELL		DOMESTIC	40.643480	-81.104080
2006	942185	HARRISON	190	145	7/10/2003	SANDSTONE	14	DOMESTIC	40.635400	-81.154166
2007	629781	HARRISON	177	50	5/9/1985	SHALE & SANDSTONE		DOMESTIC	40.643704	-81.104839
2008	942257	HARRISON	207	150	3/12/2002	CLEANOUT	177	DOMESTIC	40.643850	-81.104900
2009	877469	HARRISON	275	173	12/8/1998	SHALE	2	DOMESTIC	40.644670	-81.103970
2010	955627	HARRISON	115	39	7/25/2006	SHALE	1	DOMESTIC	40.642000	-81.104500
2011	716345	HARRISON	222	61	3/7/1992	SHALE	15	AGRIC/IRRIG	40.501995	-81.044483

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2012	2087117	HARRISON	300	149	7/2/2021	SHALE	1	DOMESTIC	40.616110	-81.102050
2013	609588	HARRISON	83	35	4/29/1985	SHALE	25	DOMESTIC	40.566838	-81.132280
2014	1008092	HARRISON	100	32	11/7/2015	SANDSTONE	22	DOMESTIC	40.567110	-81.129760
2015	213545	HARRISON	30	15	9/23/1959	SAND		DOMESTIC	40.640050	-81.092796
2016	802817	HARRISON	75	37	8/4/1995	SANDSTONE		DOMESTIC	40.636223	-81.102244
2017	875608	HARRISON	164	54	6/9/1998	SHALE	10	DOMESTIC	40.633360	-81.098260
2018	781620	HARRISON	193	64	7/3/1994	SHALE	6	DOMESTIC	40.635896	-81.099523
2019	1011199	HARRISON	55	10	4/15/2010	SANDSTONE	9	DOMESTIC	40.632950	-81.098870
2020	687861	HARRISON	125	50	1/20/1989	SHALE		DOMESTIC	40.634489	-81.097889
2021	972724	HARRISON	149	65	2/19/2004	SHALE		DOMESTIC	40.640220	-81.092320
2022	721452	HARRISON	148	112	4/28/1991	SHALE		DOMESTIC	40.633740	-81.092849
2023	930233	HARRISON	179	105	5/30/2002	SHALE	2	DOMESTIC	40.640420	-81.092090
2024	671887	HARRISON	71	27	5/7/1990	SHALE	28	DOMESTIC	40.636369	-81.096092
2025	695833	HARRISON	83	14	6/3/1989	SANDSTONE	72	DOMESTIC	40.637354	-81.095669
2026	687871	HARRISON	94	30	11/6/1989	SANDSTONE	12		40.638902	-81.098182
2027	987263	HARRISON	86	40	5/25/2006			DOMESTIC	40.638250	-81.094850
2028	849738	HARRISON	98	43	12/6/1997	SHALE	28	DOMESTIC	40.642100	-81.091080
2029	866810	HARRISON	100	49	5/17/2000	SHALE		DOMESTIC	40.639722	-81.097500
2030	690424	HARRISON	115	80	11/4/1991	SANDSTONE		DOMESTIC	40.637899	-81.091479
2031	2037079	HARRISON	120	47	4/10/2012	SANDSTONE & SHALE	14	DOMESTIC	40.639722	-81.097500
2032	2069890	HARRISON	125	23	8/27/2018	SHALE	12	AGRIC/IRRIG	40.640042	-81.091725
2033	987257	HARRISON	180	57	2/7/2006			DOMESTIC	40.642216	-81.091273
2034	500310	HARRISON	225	75	9/10/1976	SHALE	3	DOMESTIC	40.644895	-81.099311
2035	945958	HARRISON	133	90	1/9/2003	SHALE		AGRIC/IRRIG	40.646660	-81.095990
2036	2052647	HARRISON	249	120.6	5/12/2015	COAL		MONITOR	40.643417	-81.097722
2037	2052648	HARRISON	84	72	5/12/2015	SANDSTONE		MONITOR	40.643417	-81.097778
2038	2052649	HARRISON	199	125.5	5/12/2015	SHALE		MONITOR	40.643417	-81.097833
2039	2052650	HARRISON	99	71.2	5/12/2015	SANDSTONE & SHALE		MONITOR	40.643417	-81.097889
2040	914638	HARRISON	200	105	5/2/2001	SHALE		DOMESTIC	40.647060	-81.102500
2041	573712	HARRISON	118		11/17/1980	SHALE		DOMESTIC	40.643959	-81.146638
2042	477485	HARRISON	86	56	3/8/1976	SANDSTONE		DOMESTIC	40.643959	-81.146638
2043	2020116	HARRISON	90	18	10/8/2008	SANDSTONE	21	DOMESTIC	40.644600	-81.144483
2044	596846	HARRISON	70	20	5/27/1982	SHALE	4	DOMESTIC	40.643833	-81.144278
2045	103435	HARRISON	180	70	11/27/1953	SAND			40.616165	-81.104050
2046	103444	HARRISON	90	35	3/24/1954	SHALE	42	DOMESTIC	40.617281	-81.099110
2047	143552	HARRISON	72	30	10/16/1954	SHALE	64	DOMESTIC	40.617020	-81.126413

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2048	143555	HARRISON	100	40	10/19/1954	SHALE	38	DOMESTIC	40.617114	-81.128098
2049	160109	HARRISON	76	20	10/5/1955	SHALE	34		40.616861	-81.097818
2050	160119	HARRISON	72	40	7/21/1956	SHALE		DOMESTIC	40.617277	-81.129444
2051	160570	HARRISON	110	55	1/30/1956	SHALE	30	DOMESTIC	40.620758	-81.133749
2052	184977	HARRISON	65	44	9/27/1957	SHALE	15	DOMESTIC	40.617371	-81.130497
2053	213526	HARRISON	215	70	4/22/1959	SAND	25	DOMESTIC	40.617240	-81.104751
2054	213527	HARRISON	97	70	4/26/1959	SAND	20	DOMESTIC	40.619498	-81.139955
2055	213539	HARRISON	90	25	7/8/1959	SHALE	45	DOMESTIC	40.617523	-81.131512
2056	213540	HARRISON	90	48	7/24/1959	SHALE	45	DOMESTIC	40.617614	-81.132816
2057	223190	HARRISON	214	160		SHALE		DOMESTIC	40.612839	-81.099541
2058	225923	HARRISON	100	70	11/24/1958	SANDSTONE		DOMESTIC	40.617606	-81.095585
2059	255361	HARRISON	167	130		SHALE	141	DOMESTIC	40.616586	-81.105218
2060	296875	HARRISON	138	75	12/9/1963	SANDSTONE	40	DOMESTIC	40.621342	-81.146037
2061	321817	HARRISON	175	65	3/4/1965	SANDSTONE	6		40.621459	-81.145485
2062	379767	HARRISON	45	18				DOMESTIC	40.617176	-81.127513
2063	411973	HARRISON	237	160	12/17/1970	SAND	212		40.617320	-81.104749
2064	424367	HARRISON	108	29	9/6/1971	SHALE		DOMESTIC	40.617454	-81.130102
2065	424377	HARRISON	198	65	9/25/1971	SHALE			40.620368	-81.145086
2066	427259	HARRISON	120	55	5/15/1972	SHALE		DOMESTIC	40.621319	-81.150374
2067	429275	HARRISON	93	60	7/10/1972	SHALE	32	DOMESTIC	40.618508	-81.135711
2068	432426	HARRISON	125	60	5/29/1972	SHALE		DOMESTIC	40.619688	-81.137467
2069	432427	HARRISON	60	20	5/30/1972	SAND		DOMESTIC	40.622289	-81.123880
2070	432429	HARRISON	55	30	6/8/1972	SHALE		DOMESTIC	40.617521	-81.111100
2071	432445	HARRISON	109	55	8/15/1972	SHALE		DOMESTIC	40.617077	-81.119296
2072	443609	HARRISON	115	60	9/15/1972	SAND	5	DOMESTIC	40.616994	-81.122631
2073	443650	HARRISON	127	73	4/26/1973	SHALE & SANDSTONE	4	DOMESTIC	40.620397	-81.141012
2074	455437	HARRISON	136	111	8/27/1973	SAND	2	DOMESTIC	40.625204	-81.111143
2075	464165	HARRISON	183	183	3/22/1974	SANDSTONE	4	DOMESTIC	40.615415	-81.102298
2076	464217	HARRISON	98	68	2/5/1974	SHALE	5		40.621459	-81.145485
2077	476245	HARRISON	74	15	10/29/1975	SANDSTONE	4	DOMESTIC	40.623901	-81.121672
2078	493378	HARRISON	45	23	8/30/1976	SHALE	20	DOMESTIC	40.617716	-81.112973
2079	522395	HARRISON	151	62	11/5/1978	SHALE			40.616720	-81.112217
2080	522444	HARRISON	166	120	6/8/1978	SANDSTONE		DOMESTIC	40.617227	-81.125603
2081	615937	HARRISON	151	60	3/18/1986	SHALE	16		40.616561	-81.101173
2082	766960	HARRISON	298	98	5/3/1993	SHALE	10	DOMESTIC	40.615995	-81.091457
2083	965311	HARRISON	256	88	9/13/2003	SHALE		DOMESTIC	40.616333	-81.093167

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
2084	858921	HARRISON	200	102	10/7/1997	SHALE	6	DOMESTIC	40.619830	-81.082570
2085	1008215	HARRISON	95	47	1/2/2008			DOMESTIC	40.617167	-81.098833
2086	752312	HARRISON	175	104	10/26/1992	SHALE		DOMESTIC	40.616772	-81.099891
2087	902254	HARRISON	300	93	7/31/2000	SHALE	3	DOMESTIC	40.619890	-81.084660
2088	2087561	HARRISON	168	115	7/30/2021	SANDSTONE	8	DOMESTIC	40.618390	-81.109150
2089	731254	HARRISON	200	70	1/1/1990	SHALE		DOMESTIC	40.618526	-81.110786
2090	781618	HARRISON	201	106	6/30/1994	CLEANOUT		DOMESTIC	40.618528	-81.110871
2091	1016814	HARRISON	178	76	10/1/2014	SANDSTONE		DOMESTIC	40.618667	-81.112250
2092	857858	HARRISON	105	50	8/2/1997	SANDSTONE	15	DOMESTIC	40.616306	-81.113914
2093	514503	HARRISON	143	79	4/17/1977	SHALE		DOMESTIC	40.616994	-81.122631
2094	839451	HARRISON	157	109	11/6/1996	CLEANOUT		DOMESTIC	40.617110	-81.122285
2095	671506	HARRISON	217	143	10/10/1987	SAND		DOMESTIC	40.617188	-81.125322
2096	643647	HARRISON	144	43	10/7/1985	SHALE			40.617454	-81.130102
2097	461905	HARRISON	100	50	8/8/1973	SHALE	15		40.617685	-81.130874
2098	493373	HARRISON	85	52	7/13/1976	SHALE	40	DOMESTIC	40.618349	-81.134841
2099	891106	HARRISON	112	60	8/27/1999	SHALE		DOMESTIC	40.618060	-81.134860
2100	3006511	HARRISON	140	74	3/2/2023	SANDSTONE	11	DOMESTIC	40.617610	-81.135400
2101	752290	HARRISON	124	78	7/13/1992	SHALE		DOMESTIC	40.618542	-81.135752
2102	461903	HARRISON	100	50	8/8/1973	LIMESTONE	10		40.618746	-81.137098
2103	883739	HARRISON	100	47	11/18/1998	SHALE	4	DOMESTIC	40.618060	-81.136000
2104	702361	HARRISON	241	174	10/14/1989	SANDSTONE	82	DOMESTIC	40.619071	-81.137914
2105	987607	HARRISON	253	183	8/10/2005	SANDSTONE & SHALE	1	DOMESTIC	40.620500	-81.137500
2106	987589	HARRISON	246	185	2/22/2005	SHALE		DOMESTIC	40.618470	-81.136430
2107	500319	HARRISON	225	115	11/10/1976	SHALE		DOMESTIC	40.620397	-81.141012
2108	781623	HARRISON	347	258	7/18/1994	SAND		DOMESTIC	40.620438	-81.140593
2109	1012486	HARRISON	370	247	11/22/2010	SHALE		DOMESTIC	40.620500	-81.140600
2110	752311	HARRISON	303	219	10/20/1992	CORED	34	DOMESTIC	40.620676	-81.142987
2111	2025709	HARRISON	246	84	12/4/2009	SHALE	7	DOMESTIC	40.621867	-81.145217
2112	578674	HARRISON	173	70	1/6/1982	SANDSTONE	128		40.620159	-81.144055
2113	635613	HARRISON	255	181	5/31/1976	SANDSTONE			40.620159	-81.144055
2114	930253	HARRISON	354	228	11/22/2002	LIMESTONE & SHALE	5	DOMESTIC	40.619220	-81.139200
2115	2084085	HARRISON	300	110	12/22/2020	SANDSTONE		DOMESTIC	40.621470	-81.144330
2116	522356	HARRISON	225	70	5/1/1978	SHALE	130		40.621342	-81.146037
2117	650361	HARRISON	252	154	9/12/1987	SAND	18	DOMESTIC	40.621874	-81.147256
2118	500346	HARRISON	221	150	5/27/1977	SHALE		DOMESTIC	40.620911	-81.147146
2119	573706	HARRISON	221	151	9/29/1980	SANDSTONE		DOMESTIC	40.620990	-81.147598

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
2120	891093	HARRISON	131	84	6/8/1999	SHALE	88	DOMESTIC	40.619230	-81.140320
2121	820066	HARRISON	371	177	1/17/1996	SANDSTONE	4	DOMESTIC	40.622428	-81.147626
2122	514511	HARRISON	148	78	5/19/1977	SHALE	93		40.621372	-81.148561
2123	942166	HARRISON	250	174	9/16/2002	CLEANOUT	85	DOMESTIC	40.623330	-81.149720
2124	942160	HARRISON	230	151	7/23/2002	SANDSTONE & SHALE		DOMESTIC	40.633830	-81.152670
2125	1016782	HARRISON	226	153	4/18/2013			DOMESTIC	40.630333	-81.083700
2126	49418	LEE	129	45		SAND	40		40.540205	-80.953682
2127	52660	LEE	70		10/30/1948	LIMESTONE	16		40.542400	-81.034141
2128	52661	LEE	62		10/27/1948	SHALE	30		40.495614	-80.966716
2129	89167	LEE	144	100	10/18/1951	SHALE		DOMESTIC	40.542265	-81.051029
2130	89185	LEE	205	40	6/11/1951	SHALE	75	DOMESTIC	40.520432	-80.997603
2131	117860	LEE	45	12	7/10/1954	SANDSTONE	38	DOMESTIC	40.551403	-81.049306
2132	237846	LEE	492	40	11/18/1961	SHALE		PUBLIC/SEMI-PUB	40.521333	-81.001302
2133	312839	LEE	261	50	9/12/1966	SHALE & SANDSTONE	40	DOMESTIC	40.516063	-81.008043
2134	424366	LEE	65	128	9/4/1971	SAND		DOMESTIC	40.541074	-80.954674
2135	752299	LEE	201	38	8/8/1982	OLD WELL		DOMESTIC	40.521110	-81.001520
2136	318439	LEE	97	75	7/5/1965	SANDSTONE		DOMESTIC	40.523594	-81.036396
2137	390949	LEE	85	35	7/31/1971	CLAY & SHALE		DOMESTIC	40.557436	-81.012577
2138	339938	LEE	66	30		SHALE	50	DOMESTIC	40.529402	-80.998854
2139	370056	LEE	150	125	9/26/1967	SANDSTONE	57	DOMESTIC	40.527527	-80.996230
2140	390907	LEE	103	30	4/21/1969	SHALE	6	DOMESTIC	40.550200	-80.976218
2141	390918	LEE	125	58	8/15/1969	SHALE		DOMESTIC	40.529239	-80.997214
2142	427292	LEE	223	160	3/14/1974	SHALE		DOMESTIC	40.507317	-81.001035
2143	432434	LEE	125	45	6/30/1972	SHALE	9	DOMESTIC	40.520648	-81.001211
2144	507564	LEE	75	40	4/18/1978	SANDSTONE		DOMESTIC	40.511213	-81.004134
2145	942265	LEE	190	130	8/2/2002	SHALE	2	DOMESTIC	40.550480	-80.975850
2146	693169	LEE	170	74	10/4/1989	SANDSTONE	13	DOMESTIC	40.550349	-80.975278
2147	716314	LEE	177	129	9/12/1990	OLD WELL		DOMESTIC	40.550354	-80.975257
2148	550289	LEE	92	23	11/15/1980	SHALE			40.545675	-80.980179
2149	716258	LEE	361	42	2/26/1991	SHALE	23	AGRIC/IRRIG	40.545490	-80.980069
2150	464155	LEE	48	8	11/20/1973	SHALE		DOMESTIC	40.535034	-80.984167
2151	1009790	LEE	105	54	10/6/2010	LIMESTONE		DOMESTIC	40.541760	-80.983070
2152	930205	LEE	317	101	7/30/2001	OLD WELL		DOMESTIC	40.535460	-80.983720
2153	781616	LEE	312	114	6/16/1994	SHALE		DOMESTIC	40.619700	-80.952205
2154	693151	LEE	152	82	12/2/1988	SHALE	8	DOMESTIC	40.520694	-81.003879
2155	1008248	LEE	277	164	3/25/2009	SHALE		DOMESTIC	40.525660	-80.999070

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2156	693172	LEE	94	42	10/30/1989	SHALE	12	DOMESTIC	40.524379	-81.001670
2157	2065577	LEE	220	164	11/10/2017	SANDSTONE		DOMESTIC	40.524489	-81.000669
2158	480441	LEE	124	64	9/22/1976	CLAY & SHALE	10		40.522429	-81.001649
2159	875650	LEE	268	126	11/28/1998	SHALE		DOMESTIC	40.533150	-80.983750
2160	963560	LEE	300	65	10/17/2003	SHALE	1		40.533060	-80.983390
2161	858538	LEE	265	122	1/8/1998	OLD WELL		DOMESTIC	40.533030	-80.983380
2162	2053974	LEE	200	37	9/22/2015	SANDSTONE	1	AGRIC/IRRIG	40.525750	-80.998020
2163	650364	LEE	120	50	9/6/1987	COAL	6	DOMESTIC	40.622457	-80.954451
2164	693167	LEE	65	14	9/12/1989	SHALE		DOMESTIC	40.509446	-81.003502
2165	829691	LEE	100	27	11/1/1996	SHALE	3	DOMESTIC	40.508263	-81.001503
2166	752281	LEE	248	141	5/25/1992	SHALE		DOMESTIC	40.507373	-81.001373
2167	987609	LEE	286	175	8/19/2005	SHALE		DOMESTIC	40.507500	-81.001170
2168	963526	LEE	330	175	12/9/2004		7	DOMESTIC	40.514010	-81.006270
2169	653700	LEE	52	22	12/2/1988	SANDSTONE		DOMESTIC	40.504638	-80.998298
2170	764512	LEE	100	16	6/24/1993	SHALE		DOMESTIC	40.495131	-80.997717
2171	609575	LEE	66		10/15/1983	SHALE	15	DOMESTIC	40.494449	-80.997293
2172	609579	LEE	72	12	10/18/1983	SANDSTONE	15	DOMESTIC	40.494457	-80.997297
2173	3013034	LEE	180	123	1/18/2024	SANDSTONE	2	DOMESTIC	40.515780	-81.015550
2174	790955	LEE	150	66	8/15/1994	SHALE	2	DOMESTIC	40.515662	-81.012221
2175	924869	LEE	155	105	7/21/2003	SANDSTONE	5	DOMESTIC	40.515330	-81.011400
2176	766254	LEE	180	60	8/28/1993	SANDSTONE	79	DOMESTIC	40.515125	-81.007392
2177	932888	LEE	150	70	10/1/2001	SHALE		DOMESTIC	40.514890	-81.006840
2178	1019867	LEE	130	80	5/23/2019	SANDSTONE	7	DOMESTIC	40.524869	-81.038399
2179	50494	LEE	120		8/1/1951	SANDSTONE	39		40.523996	-81.037494
2180	468472	LEE	134	81	6/27/1974	SHALE	4	DOMESTIC	40.523258	-81.040073
2181	1006080	LEE	157	80	8/17/2007	SANDSTONE		DOMESTIC	40.524050	-81.038067
2182	160146	LEE	74	20	5/27/1957	SAND		DOMESTIC	40.543701	-81.014598
2183	160147	LEE	50	20	5/27/1957	SHALE	40	DOMESTIC	40.544008	-81.020573
2184	239977	LEE	54	40	10/14/1961	SAND	30	DOMESTIC	40.517993	-80.952087
2185	372035	LEE	75	40	7/31/1968	SAND	5		40.518784	-80.962527
2186	372049	LEE	74	35	10/21/1968	SAND		DOMESTIC	40.517993	-80.952087
2187	424394	LEE	43	19	11/4/1971	SHALE	35		40.544444	-81.025652
2188	829570	LEE	81	55	9/22/1997	SILTSTONE		DOMESTIC	40.545340	-81.024625
2189	802808	LEE	125	38	7/26/1995	SANDSTONE	8	DOMESTIC	40.543915	-81.024482
2190	864029	LEE	80	50	10/20/1997	SANDSTONE & SHALE		DOMESTIC	40.545210	-81.033840
2191	799641	LEE	96	60	1/10/1997	SANDSTONE	18	DOMESTIC	40.544536	-81.021513

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2192	864030	LEE	122	60	10/30/1997	SANDSTONE & SHALE	20	DOMESTIC	40.545758	-81.022475
2193	877455	LEE	150	41	10/17/1998	SHALE	10	DOMESTIC	40.545210	-81.033470
2194	839106	LEE	78	18	11/16/1996	SHALE	12	DOMESTIC	40.545669	-81.018999
2195	877494	LEE	85	18	5/10/1999	SANDSTONE	15	DOMESTIC	40.544970	-81.033110
2196	858513	LEE	148	27	8/28/1997	SHALE	15	DOMESTIC	40.547317	-81.017698
2197	819085	LEE	140	25	8/31/1995	SHALE	5	DOMESTIC	40.543977	-81.015228
2198	874648	LEE	172	80	2/17/1999	SHALE	26	DOMESTIC	40.545080	-81.021320
2199	1008080	LEE	90	52	10/29/2013	SANDSTONE	4	DOMESTIC	40.538982	-81.008991
2200	1009792	LEE	180	50	9/3/2009	SANDSTONE	9	DOMESTIC	40.534050	-81.000670
2201	888837	LEE	139	40	8/31/1999	SANDSTONE		DOMESTIC	40.540820	-81.010710
2202	802848	LEE	125	15	11/9/1995	SANDSTONE	20	DOMESTIC	40.529248	-80.983129
2203	2080900	LEE	120	30	7/23/2020	SHALE	8	DOMESTIC	40.533140	-80.995150
2204	820051	LEE	91	22	10/4/1995	SHALE		DOMESTIC	40.528293	-80.965261
2205	2013895	LEE	100	17	11/19/2007	SHALE	2	DOMESTIC	40.516519	-80.954958
2206	963539	LEE	155	40	9/28/2005	SANDSTONE & SHALE	27	DOMESTIC	40.526630	-80.978350
2207	972681	LEE	313	150	4/30/2004	SANDSTONE		DOMESTIC	40.579589	-81.089752
2208	799314	LEE		79	4/14/1995			DOMESTIC	40.490307	-80.979773
2209	1019871	LEE	355	160	9/5/2018	SANDSTONE	12	DOMESTIC	40.497130	-80.967520
2210	480437	LEE	92	45	8/3/1976	CLAY & SHALE		DOMESTIC	40.542401	-81.050394
2211	507593	LEE	65	30	8/10/1979	SANDSTONE	15	DOMESTIC	40.541572	-81.051809
2212	568407	LEE	109	35	9/13/1980	SAND		DOMESTIC	40.542945	-81.048498
2213	883325	LEE	255	40	7/10/2000	SANDSTONE	2	AGRIC/IRRIG	40.508500	-81.051000
2214	743325	LEE	300	80	1/13/1992	SHALE	14	DOMESTIC	40.543207	-81.048502
2215	2083108	LEE	140	70	11/5/2020	SANDSTONE	8	DOMESTIC	40.546013	-81.047341
2216	598790	LEE	102	67	6/10/1983	SHALE		DOMESTIC	40.543398	-81.049586
2217	858909	LEE	150	75	8/22/1997	SHALE	3	DOMESTIC	40.543625	-81.049238
2218	963518	LEE	380	58	8/31/2004	SANDSTONE	7	DOMESTIC	40.545466	-81.048181
2219	1006564	LEE	215	69	8/5/2007			DOMESTIC	40.545667	-81.047167
2220	578656	LEE	176	110	9/23/1981	SHALE	139	DOMESTIC	40.545286	-81.048488
2221	693162	LEE	64	30	7/18/1989	SHALE	17	DOMESTIC	40.546424	-81.047440
2222	635640	LEE	164	164	9/27/1986	SHALE	2	DOMESTIC	40.550437	-81.039868
2223	353804	LEE	45	18	7/29/1966	SHALE	20		40.509836	-80.969549
2224	635614	LEE	102	46	5/31/1986	SANDSTONE	21	DOMESTIC	40.510936	-80.971760
2225	522413	LEE	54	9	8/4/1977	SANDSTONE	22	DOMESTIC	40.509811	-80.970170
2226	1009788	LEE	140	43	8/25/2010	SANDSTONE	24	DOMESTIC	40.500483	-80.991860
2227	143793	LEE	215	115	9/10/1954	SHALE	10	DOMESTIC	40.551758	-80.973370

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2228	143794	LEE	98	45	9/10/1954	SAND	40	DOMESTIC	40.555035	-80.980820
2229	241452	LEE	116	60		SANDSTONE	58		40.541683	-80.954528
2230	802841	LEE	150	79	11/2/1995	SANDSTONE	6	DOMESTIC	40.558364	-80.989200
2231	799322	LEE	207	44	7/3/1995	SHALE	10	DOMESTIC	40.555365	-80.980978
2232	2046564	LEE	100	50	2/26/2014	SANDSTONE	17	DOMESTIC	40.556433	-80.981033
2233	820026	LEE	103	61	7/3/1995	SHALE	6	DOMESTIC	40.555340	-80.979941
2234	930247	LEE	178	60	9/19/2002	SHALE	6	DOMESTIC	40.557490	-80.986490
2235	891097	LEE	253	71	6/15/1999	SHALE	1	DOMESTIC	40.551460	-80.972250
2236	2077923	LEE	260	57	1/7/2020	SHALE	2	DOMESTIC	40.552690	-80.973910
2237	963549	LEE	380	113	7/27/2006	SANDSTONE	15	DOMESTIC	40.486860	-81.019310
2238	186923	LEE	100	50	2/11/1957	SHALE	57	DOMESTIC	40.511435	-81.039370
2239	296893	LEE	115	55		SHALE	6	DOMESTIC	40.508667	-81.038108
2240	695849	LEE	295	117	8/22/1989	SANDSTONE		DOMESTIC	40.520804	-81.027701
2241	671867	LEE	127	60	10/26/1988	LIMESTONE	3	DOMESTIC	40.519454	-81.028802
2242	826286	LEE	259	53	10/26/1996	SHALE		DOMESTIC	40.518961	-81.031088
2243	528123	LEE	120	98	2/8/1980	SANDSTONE	4	DOMESTIC	40.514052	-81.035905
2244	924894	LEE	350	160	5/20/2002	SANDSTONE		DOMESTIC	40.500270	-81.031810
2245	613638	LEE	122	82	9/25/1987	SHALE	7	DOMESTIC	40.507949	-81.038773
2246	894300	LEE	105	50	5/6/2000	SHALE	8	DOMESTIC	40.509170	-81.037833
2247	1007096	LEE	225	98	11/13/2008	SHALE	1	DOMESTIC	40.507367	-81.042367
2248	894274	LEE	205	70	1/14/2000	SHALE	6	DOMESTIC	40.493600	-81.029650
2249	967520	LEE	275	75	1/28/2005		10	DOMESTIC	40.492800	-81.029050
2250	992609	LEE	265	113	9/18/2007	SANDSTONE & SHALE		DOMESTIC	40.505367	-81.038367
2251	2011914	LEE	275	61	8/13/2007	SHALE	2	DOMESTIC	40.494628	-81.024414
2252	766256	LEE	200	98	11/18/1993	SANDSTONE		DOMESTIC	40.494583	-81.032544
2253	92668	LEE	202	50		SHALE	58		40.533939	-81.038163
2254	206099	LEE	128	105		SAND	46	DOMESTIC	40.541090	-81.025944
2255	368418	LEE	65	13	7/15/1970	SAND	10		40.548250	-81.025617
2256	752318	LEE	370	55	12/10/1992	SANDSTONE	10	DOMESTIC	40.549876	-81.024007
2257	801987	LEE	180	60	12/3/1995	SANDSTONE	7	DOMESTIC	40.547436	-81.025815
2258	464220	LEE	86	58	3/5/1974	CLEANOUT		DOMESTIC	40.541388	-81.027572
2259	2084273	LEE	160	73	1/13/2021	SHALE	1	DOMESTIC	40.541430	-81.027800
2260	716276	LEE	155	92	7/25/1991	SHALE		DOMESTIC	40.538531	-81.026480
2261	891149	LEE	330	107.5	9/30/2000	CLAY & SHALE		DOMESTIC	40.538010	-81.028960
2262	877508	LEE	150	60	6/25/1999	SHALE	5	DOMESTIC	40.538010	-81.028930
2263	1002415	LEE	193	32	4/12/2006	SHALE	3	DOMESTIC	40.532670	-81.034500

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
2264	955612	LEE	155	55	6/12/2003	CLAY & SHALE		DOMESTIC	40.536390	-81.037500
2265	671543	LEE	223	50	5/31/1988	SHALE	3	DOMESTIC	40.556402	-81.009290
2266	507579	LEE	100	25	9/16/1978	LIMESTONE		DOMESTIC	40.548902	-81.013345
2267	1012866	LEE	145	38	12/20/2011	SHALE	5	DOMESTIC	40.550617	-81.005933
2268	2048047	LEE	300	90	6/27/2014	SANDSTONE	10	DOMESTIC	40.548760	-81.013490
2269	318429	LEE	80	28		SHALE		DOMESTIC	40.510802	-80.964348
2270	92661	LEE	80	50		SHALE			40.533324	-80.973462
2271	891146	LEE	254	129.5	8/26/2000	SHALE	2	DOMESTIC	40.545220	-80.975230
2272	902196	LEE	250	85	10/21/1999	SHALE	3	DOMESTIC	40.544560	-80.973990
2273	891114	LEE	253	93	10/19/1999	SHALE		DOMESTIC	40.543660	-80.974160
2274	894285	LEE	205	80	8/29/2000	SHALE	5	DOMESTIC	40.536670	-80.974000
2275	894260	LEE	230	80	8/20/1999	SANDSTONE	3	DOMESTIC	40.530050	-80.975780
2276	883740	LEE	228	50	11/28/1998	SHALE	10	DOMESTIC	40.529950	-80.975980
2277	963513	LEE	205	87	4/10/2004	SANDSTONE	6	DOMESTIC	40.529300	-80.976130
2278	1008244	LEE	213	137	12/5/2008			DOMESTIC	40.534330	-80.974670
2279	273738	LEE	114			SHALE		DOMESTIC	40.519651	-80.999934
2280	493725	LEE	144	85	9/10/1976	SHALE	24		40.519703	-81.000300
2281	241498	LEE	219	60		SHALE	134	DOMESTIC	40.536867	-80.959841
2282	2085229	LEE	280	154	3/12/2021	SANDSTONE		DOMESTIC	40.535400	-80.960170
2283	372005	LEE	186	70	3/28/1968	SHALE	186		40.522623	-81.002843
2284	738043	LEE	200	61	10/15/1992	SANDSTONE		DOMESTIC	40.526106	-81.023099
2285	738025	LEE	100	31	10/23/1991	SHALE		DOMESTIC	40.525324	-81.020561
2286	790931	LEE	100	59	4/18/1994	SHALE	16	DOMESTIC	40.524564	-81.017754
2287	641773	LEE	104	61	5/27/1984	SHALE	7	DOMESTIC	40.522471	-81.008837
2288	987615	LEE	316	122	10/4/2005			DOMESTIC	40.523000	-81.003170
2289	568402	LEE	115	60	7/7/1980	SAND	75	DOMESTIC	40.508886	-81.008409
2290	1015639	LEE	150	88	6/26/2015	EXISTING WELL		DOMESTIC	40.510722	-81.006423
2291	894294	LEE	305	138	3/14/2001	SANDSTONE	4	DOMESTIC	40.510570	-81.006530
2292	877500	LEE	150	65	5/25/1999	SANDSTONE		DOMESTIC	40.508540	-81.008930
2293	930226	LEE	318	116	4/10/2002	EXISTING WELL		DOMESTIC	40.506080	-81.009140
2294	802755	LEE	150	18	10/26/1994	SHALE	3	DOMESTIC	40.514247	-81.049557
2295	659076	LEE	145	91	6/8/1987	SHALE		DOMESTIC	40.511884	-81.045107
2296	2034878	LEE	150		10/7/2011	LIMESTONE	16	HEATING/COOLING	40.511620	-81.039380
2297	1005217	LEE	175		6/7/2008	SANDSTONE & SHALE		DOMESTIC	40.501670	-81.039230
2298	1012473	LEE	66	13	9/3/2009			DOMESTIC	40.503060	-81.035640
2299	963543	LEE	350	180	5/23/2006	SANDSTONE	2	DOMESTIC	40.501600	-81.037300

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
2300	712602	LEE	198	84	6/11/1990	SHALE	8	DOMESTIC	40.501135	-81.037897
2301	3000792	LEE	452		4/7/2022			DRY/NO WATER	40.502222	-81.035278
2302	3000811	LEE	132	45	5/13/2022	SHALE	20	DOMESTIC	40.501389	-81.035000
2303	894261	LEE	255	90	8/30/1999	SHALE	1	DOMESTIC	40.500970	-81.025220
2304	894262	LEE	405	135	10/3/1999	SHALE	12	DOMESTIC	40.500970	-81.025220
2305	797347	LEE	253	148	9/27/1995	SHALE	25	DOMESTIC	40.503273	-81.021902
2306	877448	LEE	125	11	9/23/1998	SHALE	6	DOMESTIC	40.497155	-81.003991
2307	613601	LEE	80	40	11/12/1983	SHALE	40	DOMESTIC	40.497308	-81.001871
2308	877496	LEE	62	41	5/10/1999	SHALE	3	DOMESTIC	40.506920	-81.023230
2309	490126	LEE	80	32	10/7/1975	SHALE & SANDSTONE	3	DOMESTIC	40.495781	-81.052723
2310	1009781	LEE	155	80	5/19/2010	SANDSTONE		DOMESTIC	40.491250	-81.038650
2311	738014	LEE	150	32.5	10/10/1991	SANDSTONE		DOMESTIC	40.494798	-81.036862
2312	924880	LEE	230	42	3/25/2003	SANDSTONE		DOMESTIC	40.496450	-81.033770
2313	844939	LEE	380	80	6/11/1997	SAND & ROCK	5	DOMESTIC	40.534320	-81.033850
2314	599251	LEE	180	50	2/25/1981	CREVICE	3	DOMESTIC	40.522191	-80.979575
2315	370074	LEE	235	170	7/31/1979	SHALE	1	DOMESTIC	40.525646	-80.996644
2316	747208	LEE	211	150	7/6/1993	SAND & ROCK	2	DOMESTIC	40.527693	-80.995093
2317	693777	LEE	91	23	6/10/1988	SHALE	21	DOMESTIC	40.526238	-80.994573
2318	955554	LEE	165	34	3/29/2003	SHALE	20	DOMESTIC	40.526630	-80.994570
2319	866036	LEE	76	34	3/30/1999	LIMESTONE		DOMESTIC	40.521730	-80.980280
2320	624963	LEE	165	125	9/23/1986	SHALE			40.525372	-80.988298
2321	493737	LEE	210	130	11/11/1976	SAND	10	DOMESTIC	40.521925	-80.984808
2322	498027	LEE	75	50	9/11/1976	SHALE		DOMESTIC	40.518511	-80.976801
2323	747210	LEE	203	80	7/30/1993	SHALE		DOMESTIC	40.520514	-80.978782
2324	738022	LEE	250	67	10/16/1991	SANDSTONE		DOMESTIC	40.518648	-80.976708
2325	883309	LEE	264	68	9/24/1998	SHALE	2	DOMESTIC	40.518669	-80.976698
2326	963529	LEE	230	50	4/26/2005		2	DOMESTIC	40.484700	-80.976350
2327	2074523	LEE	120	19	6/24/2019	SHALE		DOMESTIC	40.549967	-80.960747
2328	712603	LEE	198	61	6/16/1990	SHALE	4	DOMESTIC	40.522667	-80.997849
2329	902268	LEE	50	19	11/2/2000	SANDSTONE		DOMESTIC	40.523730	-80.997710
2330	718762	LEE	89	50	9/10/1991	SHALE	16	DOMESTIC	40.530710	-80.999169
2331	960516	LEE	200	65	9/3/2003	SHALE	4	DOMESTIC	40.530340	-81.022760
2332	50479	LEE	70		1/1/1951	ROCK	16	DOMESTIC	40.522234	-81.006978
2333	50493	LEE	66		7/25/1951	ROCK	20		40.545584	-81.033825
2334	89178	LEE	82	25		SHALE	20		40.547994	-81.040736
2335	95931	LEE	143	52	6/18/1953	SHALE	19	DOMESTIC	40.528621	-81.005973

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2336	103406	LEE	48	30	4/8/1953	SHALE	30	DOMESTIC	40.549077	-81.044234
2337	125968	LEE	155	115	10/1/1954	SAND		DOMESTIC	40.532451	-81.023654
2338	143588	LEE	122	25	8/15/1955	SAND	20		40.550319	-81.045808
2339	184955	LEE	158	100	5/9/1956	SHALE	30	DOMESTIC	40.517694	-81.017794
2340	184957	LEE	182		5/25/1956	SHALE	25	DOMESTIC	40.526769	-81.025113
2341	186908	LEE	130	50	11/23/1956	SHALE	64	DOMESTIC	40.517989	-81.021707
2342	186909	LEE	117	80	11/23/1956	SHALE	20	DOMESTIC	40.529593	-81.024518
2343	186910	LEE	36	12	11/23/1956	SHALE	28	DOMESTIC	40.544640	-81.026962
2344	186911	LEE	52	16	11/23/1956	SAND			40.512544	-80.993033
2345	186922	LEE	76	18	2/1/1957	SANDSTONE	6	DOMESTIC	40.505191	-80.977547
2346	186946	LEE	47	18		SHALE		DOMESTIC	40.546546	-81.037406
2347	206060	LEE	110	80		SAND		DOMESTIC	40.507571	-80.986587
2348	206075	LEE	104	78	12/3/1953	SANDSTONE	60	DOMESTIC	40.537066	-81.026353
2349	213505	LEE	62	35	7/21/1958	SAND		DOMESTIC	40.514205	-80.993955
2350	213517	LEE	98	60	10/30/1958	SHALE	35	DOMESTIC	40.516548	-80.995582
2351	239964	LEE	81	30	5/20/1961	SHALE	40	DOMESTIC	40.548636	-81.043123
2352	239983	LEE	53	25	9/18/1962	SHALE	30	DOMESTIC	40.519719	-81.001541
2353	239985	LEE	50	12	11/27/1962	SHALE		DOMESTIC	40.501443	-80.978583
2354	241474	LEE	225	125		SHALE	65	DOMESTIC	40.528864	-81.024854
2355	283027	LEE	37	19	9/26/1964	FIRE CLAY	6	DOMESTIC	40.515812	-81.012518
2356	291066	LEE	105	60	2/28/1964	SANDSTONE	14		40.548479	-81.045221
2357	291076	LEE	75	35	10/3/1974	LIMESTONE	19		40.548981	-81.043434
2358	325773	LEE	80	42	12/19/1966	SHALE	5		40.552704	-81.051438
2359	339909	LEE	175	100	9/21/1965	SHALE	68		40.524673	-81.026530
2360	379797	LEE	355	140		SANDSTONE	85	DOMESTIC	40.499609	-80.972035
2361	394352	LEE	155	100	5/17/1969	SHALE		DOMESTIC	40.523719	-81.028317
2362	394368	LEE	120		5/5/1970	SHALE		DOMESTIC	40.525025	-81.027542
2363	396671	LEE	112	70		SANDSTONE	70	DOMESTIC	40.549044	-81.044349
2364	400735	LEE	220	105	6/19/1970	CLEANOUT			40.520655	-81.002813
2365	427257	LEE	175	140		SANDSTONE		DOMESTIC	40.522162	-81.000399
2366	427537	LEE	45	26	1/20/1973	CLAY & SHALE		DOMESTIC	40.515775	-81.011307
2367	432422	LEE	84	50	5/11/1972	SHALE		DOMESTIC	40.514534	-80.994354
2368	455428	LEE	170	115	8/10/1973	SAND	4	DOMESTIC	40.518254	-81.000821
2369	462298	LEE	260	140		SANDSTONE	24		40.494900	-80.965261
2370	464223	LEE	240	100	3/22/1974	SHALE	15	DOMESTIC	40.517646	-81.000179
2371	522677	LEE	218	125	9/9/1978	SHALE		DOMESTIC	40.510024	-80.989604

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2372	2058898	LEE	180	58	8/17/2016	SHALE	2	AGRIC/IRRIG	40.495930	-80.965880
2373	898767	LEE	80	54	8/26/1999	SHALE		DOMESTIC	40.555350	-81.053300
2374	679113	LEE	116	53	9/2/1988	SHALE	5	DOMESTIC	40.552861	-81.049413
2375	716274	LEE	190	56	7/20/1991	SANDSTONE		DOMESTIC	40.551115	-81.048351
2376	716270	LEE	299	119	6/13/1991	SANDSTONE		DOMESTIC	40.550932	-81.048112
2377	730360	LEE	260	130	8/16/1991	STONE	7	DOMESTIC	40.551178	-81.047235
2378	716326	LEE	148	30.5	10/29/1991	SHALE		DOMESTIC	40.550337	-81.047263
2379	2027941	LEE	179	29	7/1/2010	SHALE		DOMESTIC	40.550270	-81.044680
2380	609572	LEE	60	10	6/26/1982	SHALE	22	DOMESTIC	40.547493	-81.042130
2381	902213	LEE	100	47	12/28/1999	SHALE	10	DOMESTIC	40.551280	-81.048310
2382	601502	LEE	149	50	4/4/1981	SHALE	20		40.549446	-81.039895
2383	891117	LEE	259	78.5	11/6/1999	SHALE		DOMESTIC	40.551250	-81.048270
2384	641778	LEE	45	15	9/22/1986	SHALE			40.547160	-81.041211
2385	766968	LEE	263	42	6/4/1993	SHALE		DOMESTIC	40.547344	-81.040944
2386	721718	LEE	148	27	7/7/1991	SANDSTONE	16	DOMESTIC	40.545814	-81.036331
2387	955563	LEE	146	80	11/30/2003	SHALE	5	DOMESTIC	40.536000	-81.025780
2388	642214	LEE	238	142	11/26/1984	SHALE			40.530409	-81.024529
2389	1008103	LEE	130	40	3/30/2014		5	DOMESTIC	40.528406	-81.024397
2390	987618	LEE	253	116	10/15/2005			DOMESTIC	40.527170	-81.025830
2391	1021426	LEE	206	98	9/18/2020	EXISTING WELL		DOMESTIC	40.526259	-81.026664
2392	641769	LEE	77	39	3/20/1984	SHALE	2	DOMESTIC	40.525148	-81.026347
2393	839433	LEE	187	117	8/16/1996	SHALE			40.524780	-81.027270
2394	894282	LEE	330	84	8/8/2000	SHALE	3	DOMESTIC	40.524838	-81.027088
2395	641770	LEE	175	66	10/31/1984	SANDSTONE		DOMESTIC	40.525025	-81.027542
2396	802754	LEE	200	118	10/24/1994	SANDSTONE	8	DOMESTIC	40.524905	-81.027694
2397	2074667	LEE	240	134	7/16/2019	SHALE	1	DOMESTIC	40.524898	-81.027770
2398	829652	LEE	200	107	5/2/1996	SHALE	3	PUBLIC/SEMI-PUB	40.524510	-81.026580
2399	1022535	LEE	266	113	6/25/2023	SHALE	4	DOMESTIC	40.523611	-81.028056
2400	924893	LEE	305	40	7/5/2002	SHALE & SANDSTONE	25	DOMESTIC	40.520387	-81.021451
2401	790965	LEE	150	61	8/23/1994	SANDSTONE	8	DOMESTIC	40.517890	-81.019564
2402	790975	LEE	150	61	6/1/1994	SANDSTONE	8	DOMESTIC	40.517890	-81.019564
2403	930210	LEE	320	175	8/29/2001	OLD WELL		DOMESTIC	40.517031	-81.017374
2404	1006071	LEE	142	100	6/10/2009	SANDSTONE & SHALE	7	DOMESTIC	40.517050	-81.016717
2405	963548	LEE	195	135	7/20/2006	SHALE		DOMESTIC	40.518823	-81.014646
2406	747206	LEE	136	70	5/24/1993	SHALE	1	DOMESTIC	40.516346	-81.008686
2407	718773	LEE	142	70	12/31/1991	SHALE		DOMESTIC	40.516960	-81.008045

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2408	866818	LEE	172	98	12/28/2000	SANDSTONE	2	DOMESTIC	40.517190	-81.007880
2409	772461	LEE	167	130	10/11/1993	SHALE	76	DOMESTIC	40.517689	-81.012580
2410	708595	LEE	335	133	4/28/1990	SANDSTONE		DOMESTIC	40.519018	-81.005185
2411	752303	LEE	375	125	8/24/1992	SHALE		DOMESTIC	40.518865	-81.005525
2412	829701	LEE	175	54	1/27/1997	SHALE	9	DOMESTIC	40.518865	-81.005525
2413	653682	LEE	112	34	8/8/1988	ROCK	2	DOMESTIC	40.519739	-81.004486
2414	2090110	LEE	140	19	12/13/2021	LIMESTONE	3	DOMESTIC	40.520420	-81.002720
2415	877433	LEE	150	32	6/26/1998	SANDSTONE		DOMESTIC	40.519956	-81.003039
2416	924876	LEE	55	24	4/16/2003	SANDSTONE	10	DOMESTIC	40.519900	-81.004350
2417	693780	LEE	83	30	12/18/1989	SHALE		DOMESTIC	40.519317	-81.002095
2418	963534	LEE	79	60	6/11/2005		7	DOMESTIC	40.518847	-81.001508
2419	721469	LEE	200	120	10/14/1991	SANDSTONE		DOMESTIC	40.518789	-81.001301
2420	1011738	LEE	250	101	7/17/2008	SHALE	3	DOMESTIC	40.501670	-80.979620
2421	599281	LEE	175	125	10/13/1984	SANDSTONE	2	DOMESTIC	40.518074	-81.000619
2422	1008091	LEE	305	75	11/12/2015	SANDSTONE		INDUSTRIAL	40.517750	-80.993030
2423	659088	LEE	128	79	7/20/1987	SHALE		DOMESTIC	40.517335	-80.996133
2424	693790	LEE	102	40	3/28/1990	COAL		DOMESTIC	40.516592	-80.995972
2425	902226	LEE	200	53	3/6/2000	SHALE	100	DOMESTIC	40.500690	-80.978170
2426	1006068	LEE	307	128	7/13/2007	SANDSTONE	11	DOMESTIC	40.516467	-80.995933
2427	578675	LEE	84	43	1/25/1982	DUG WELL		DOMESTIC	40.514534	-80.994354
2428	781593	LEE	252	157	12/7/1993	SHALE	3	DOMESTIC	40.514106	-80.994838
2429	1008097	LEE	155	80	10/20/2014	SANDSTONE	6	DOMESTIC	40.510929	-80.989238
2430	858510	LEE	278	104	8/9/1997	SHALE		AGRIC/IRRIG	40.508449	-80.987913
2431	2051380	LEE	180	100	3/24/2015	SHALE	31	DOMESTIC	40.499467	-80.969674
2432	930568	LEE	322	95	10/12/2001	SHALE	5	DOMESTIC	40.499520	-80.971460
2433	829645	LEE	125	31	4/6/1996	SHALE	3	DOMESTIC	40.499337	-80.968241
2434	844355	LEE	150	77	11/3/1996	SHALE		DOMESTIC	40.494314	-80.962273
2435	2082871	LEE	180	45	10/23/2020	SHALE	1	DOMESTIC	40.552420	-81.050050
2436	1019872	LEE	130	55	8/23/2018	SANDSTONE	5	DOMESTIC	40.554750	-81.055460
2437	883332	LEE	125	11	10/15/2000	SANDSTONE		DOMESTIC	40.548000	-81.038000
2438	1021440	LEE	264	48	8/11/2021	SANDSTONE		DOMESTIC	40.521363	-81.026141
2439	894296	LEE	255		10/24/2000	SHALE	12	DOMESTIC	40.509000	-81.007500
2440	909963	LEE	172	118	9/3/2000	SHALE	24	DOMESTIC	40.512620	-80.993230
2441	1019873	LEE	130	30	4/30/2018	SANDSTONE	12	DOMESTIC	40.521420	-81.002490
2442	924881	LEE	55	30	1/13/2003	SANDSTONE	9	DOMESTIC	40.521550	-81.003790
2443	781602	LEE	147	100	3/9/1994	SHALE	8	DOMESTIC	40.520044	-80.999652

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
2444	52703	LOUDON	85	20	11/12/1948	SHALE	15		40.472851	-81.011498
2445	474167	LOUDON	140	80	1/6/1975	SHALE	15	DOMESTIC	40.466450	-81.001217
2446	528104	LOUDON	120	90	2/4/1980	SHALE	25	DOMESTIC	40.484337	-80.981449
2447	394359	LOUDON	200	100	9/19/1969	SHALE	10	DOMESTIC	40.470384	-81.000747
2448	394378	LOUDON	90	35	11/23/1970	SHALE	27	DOMESTIC	40.474168	-81.003907
2449	449810	LOUDON	75	35	2/21/1973	SHALE	10	DOMESTIC	40.478802	-81.007887
2450	568406	LOUDON	82	43	9/12/1980	SAND		DOMESTIC	40.523378	-81.001044
2451	1008219	LOUDON	125	12	2/24/2008	SHALE	4	DOMESTIC	40.483508	-80.998337
2452	615946	LOUDON	103	42	1/12/1987	SANDSTONE	3	DOMESTIC	40.483456	-81.002831
2453	790967	LOUDON	75	3	9/1/1994	SHALE	8	DOMESTIC	40.483015	-81.001536
2454	641788	LOUDON	115	78	3/30/1987	SHALE		DOMESTIC	40.481152	-81.003110
2455	394372	LOUDON	95	45	7/4/1970	SHALE	3	DOMESTIC	40.465845	-81.018288
2456	802814	LOUDON	150	30	7/27/1995	SHALE	4	DOMESTIC	40.464729	-81.031611
2457	2039989	LOUDON	140	59	10/1/2012	SANDSTONE		DOMESTIC	40.468010	-81.030830
2458	902180	LOUDON	75	19	9/16/1999	SHALE	9	DOMESTIC	40.463520	-81.013190
2459	2054531	LOUDON	235	57	9/29/2015	SANDSTONE	19	DOMESTIC	40.463718	-81.020394
2460	493714	LOUDON	185	80	7/6/1976	SHALE	3		40.483237	-80.971787
2461	2041149	LOUDON	402	400	12/10/2012		4	DRY/NO WATER	40.476823	-80.985224
2462	2071074	LOUDON	140	64	10/30/2018	SHALE		DOMESTIC	40.471104	-80.999356
2463	3007850	LOUDON	260	136	5/9/2023	SHALE	2	DOMESTIC	40.479710	-80.984060
2464	3014737	LOUDON	140	90	4/24/2024	SHALE		DOMESTIC	40.480782	-80.992274
2465	940728	LOUDON	200	72	6/13/2002	SANDSTONE & SHALE	1	DOMESTIC	40.484770	-80.979900
2466	877450	LOUDON	150	63	9/30/1998	SHALE	3	DOMESTIC	40.484060	-80.979630
2467	922493	LOUDON	125	26	11/16/2001	LOAM	6	DOMESTIC	40.485460	-80.977390
2468	2069189	LOUDON	220	23	7/8/2018	SHALE	2	AGRIC/IRRIG	40.481340	-80.980270
2469	902232	LOUDON	150	93	4/5/2000	SHALE	3	AGRIC/IRRIG	40.484070	-80.977560
2470	474188	LOUDON	125		8/16/1975	SANDSTONE		DOMESTIC	40.490609	-80.979943
2471	877492	LOUDON	250	64	4/22/1999	SHALE		DOMESTIC	40.491710	-80.977840
2472	3008852	LOUDON	180	44	6/20/2023	SANDSTONE	1	DOMESTIC	40.488320	-80.978980
2473	598774	LOUDON	130	60	6/11/1982	SHALE			40.488684	-80.980235
2474	892136	LOUDON	185	75	11/9/1999	SANDSTONE	2	DOMESTIC	40.491040	-80.978550
2475	1014484	LOUDON	305	175	3/30/2012	SANDSTONE	3	DOMESTIC	40.486000	-80.974500
2476	902243	LOUDON	150	47	6/16/2000	ROCK	3	DOMESTIC	40.485020	-80.980490
2477	2078779	LOUDON	260	56	3/18/2020	EXISTING WELL		DOMESTIC	40.484940	-80.980310
2478	692981	LOUDON	165		11/15/1989	SHALE		DOMESTIC	40.579589	-81.089752
2479	692982	LOUDON	165		11/16/1989	SHALE		DOMESTIC	40.579589	-81.089752

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2480	952362	LOUDON	250		11/13/2002	SHALE & SANDSTONE	1	DOMESTIC	40.579589	-81.089752
2481	49431	LOUDON	65	25	1/1/1948	SHALE	48		40.470489	-81.003157
2482	184952	LOUDON	64	30	4/7/1956	SANDSTONE		DOMESTIC	40.474462	-81.013579
2483	184979	LOUDON	100	30	10/5/1957	SHALE		DOMESTIC	40.474941	-81.014483
2484	186915	LOUDON	136	95	12/22/1956	SAND	28	DOMESTIC	40.481630	-81.017228
2485	213511	LOUDON	99	60	9/12/1958	SHALE	32	DOMESTIC	40.483422	-81.020388
2486	283028	LOUDON	93	49	9/21/1964	SANDSTONE	7		40.479591	-81.019294
2487	283033	LOUDON	101	64	12/7/1964	SANDSTONE	4	DOMESTIC	40.478648	-81.018768
2488	312840	LOUDON	95	60	9/16/1966	SHALE	10	DOMESTIC	40.466086	-81.002339
2489	318418	LOUDON	200	135	11/16/1964	SHALE		DOMESTIC	40.467023	-81.001493
2490	339910	LOUDON	235	170	9/29/1965	SHALE		DOMESTIC	40.471517	-81.004545
2491	340470	LOUDON	400	46	12/27/1966	SHALE		DOMESTIC	40.474226	-81.012890
2492	390906	LOUDON	103	50	3/30/1969	COAL	18		40.479978	-81.018165
2493	432428	LOUDON	95	60	6/1/1972	SHALE	6		40.473688	-81.011263
2494	449805	LOUDON	90	65	12/26/1972	SHALE	20		40.479879	-81.018279
2495	449825	LOUDON	180	84	7/24/1973	SANDSTONE	20	DOMESTIC	40.488878	-81.020428
2496	474183	LOUDON	60		6/30/1975	SANDSTONE	3	DOMESTIC	40.489282	-81.019869
2497	641755	LOUDON	249	158	7/30/1983	SANDSTONE		DOMESTIC	40.471517	-81.004545
2498	802439	LOUDON	360	100	6/9/1995	SANDSTONE	115	DOMESTIC	40.482764	-81.020223
2499	819084	LOUDON	100	40	8/8/1995	SANDSTONE	12	DOMESTIC	40.481975	-81.022937
2500	2045440	LOUDON	175	122	11/9/2013	SANDSTONE	12	DOMESTIC	40.480433	-81.018933
2501	500325	LOUDON	106	38	12/21/1976	SHALE	85		40.479591	-81.019294
2502	710131	LOUDON	84	46	4/10/1991	SHALE	12	DOMESTIC	40.479492	-81.019260
2503	967764	LOUDON	270	70	9/8/2003	CLEANOUT	203	DOMESTIC	40.472830	-81.009500
2504	963546	LOUDON	305	131	5/30/2006	SHALE & SANDSTONE	6	DOMESTIC	40.473690	-81.012190
2505	766988	LOUDON	341	132	8/25/1993	SHALE	15	INDUSTRIAL	40.474114	-81.012787
2506	866047	LOUDON	126	58	10/29/2000	SANDSTONE		DOMESTIC	40.465770	-81.002150
2507	1009776	LOUDON	160	39	8/25/2009	SANDSTONE	11	DOMESTIC	40.478483	-81.018650
2508	957266	LOUDON	101	53	4/7/2003	SHALE	2	DOMESTIC	40.474080	-81.012120
2509	291051	LOUDON	172	70	1/8/1963	COAL	50		40.488285	-81.008343
2510	394355	LOUDON	60	35		SANDSTONE	5	DOMESTIC	40.484823	-81.029224
2511	394392	LOUDON	127	85	9/24/1971	SAND	50	DOMESTIC	40.490973	-81.003108
2512	474179	LOUDON	60	30	5/19/1975	SHALE		DOMESTIC	40.484823	-81.029224
2513	992596	LOUDON	225	49	4/4/2007	SANDSTONE		DOMESTIC	40.479400	-81.036880
2514	1004879	LOUDON	125	48	10/29/2010	SANDSTONE	5	DOMESTIC	40.485550	-81.029583
2515	2007890	LOUDON	200	160	1/18/2007	SHALE	14	DOMESTIC	40.490560	-81.017670

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2516	764548	LOUDON	150	78	2/9/1994	SANDSTONE		DOMESTIC	40.490300	-81.011018
2517	1006544	LOUDON	138	41	3/25/2015	SANDSTONE		DOMESTIC	40.489000	-81.005300
2518	802847	LOUDON	200	98	11/9/1995	SHALE	6	AGRIC/IRRIG	40.491596	-80.998011
2519	902201	LOUDON	200	39	11/17/1999	SHALE	3	DOMESTIC	40.491190	-80.977290
2520	866041	LOUDON	118	55	9/29/1999	LIMESTONE		DOMESTIC	40.491790	-80.977460
2521	942254	LOUDON	441	175	3/6/2002	LIMESTONE	3	DOMESTIC	40.487830	-80.978480
2522	2061313	LOUDON	200	32	2/20/2017	SANDSTONE	5	DOMESTIC	40.490152	-80.964430
2523	394356	LOUDON	95	50	9/12/1969	SAND		DOMESTIC	40.473512	-81.037144
2524	721713	LOUDON	82	21.5	6/27/1991	SHALE	13	DOMESTIC	40.471060	-81.035926
2525	2083179	LOUDON	140	32	11/9/2020	SHALE	1	DOMESTIC	40.468960	-81.034660
2526	738004	LOUDON	98	37	8/30/1991	SANDSTONE	15	DOMESTIC	40.466120	-81.034283
2527	670249	LOUDON	97	59	10/22/1994	SHALE	3	DOMESTIC	40.466123	-81.002299
2528	3012323	LOUDON	110	70	12/15/2023	SHALE	4	DOMESTIC	40.465850	-81.002513
2529	716260	LOUDON	108	57	3/14/1991	SHALE		DOMESTIC	40.465972	-81.000765
2530	493365	LOUDON	104	50	5/31/1976	SHALE	2	DOMESTIC	40.469377	-81.000962
2531	273747	MONROE	136	100	5/8/1963	SHALE		DOMESTIC	40.579589	-81.089752
2532	802777	MONROE	100		3/3/1995	SHALE	3	DOMESTIC	40.570780	-81.126944
2533	272471	MONROE	75	35	12/4/1961	SHALE		DOMESTIC	40.579589	-81.089752
2534	864278	ORANGE	338	96	11/22/1997	SANDSTONE	18	DOMESTIC	40.513707	-81.090481
2535	507594	ORANGE	225	150	9/4/1979	SAND	10	DOMESTIC	40.513781	-81.087599
2536	429280	ORANGE	138	65	8/12/1972	SHALE	18	DOMESTIC	40.579589	-81.089752
2537	186932	PERRY	80	30	5/14/1957	SHALE		DOMESTIC	40.492960	-81.073354
2538	318416	PERRY	150	70		SHALE		DOMESTIC	40.492960	-81.073354
2539	318417	PERRY	85	60	11/7/1964	SHALE	40	DOMESTIC	40.492960	-81.073354
2540	474151	PERRY	80	60	6/17/1974	SHALE		DOMESTIC	40.480448	-81.073666
2541	622403	PERRY	115	92	8/30/1982	SANDSTONE		DOMESTIC	40.486007	-81.072655
2542	641764	PERRY	82	41	11/11/1983	SANDSTONE	2	DOMESTIC	40.487197	-81.072723
2543	609589	PERRY	119	77	5/12/1985	SHALE	24	DOMESTIC	40.485399	-81.072566
2544	987597	PERRY	159	82	5/25/2005			DOMESTIC	40.481090	-81.073250
2545	987628	PERRY	162	85	12/17/2005	SANDSTONE		DOMESTIC	40.484008	-81.073004
2546	766996	PERRY	78	26	10/2/1993	SANDSTONE	66	DOMESTIC	40.483173	-81.072528
2547	790969	PERRY	175	72	9/26/1994	OLD WELL		DOMESTIC	40.482087	-81.073583
2548	799293	PERRY	119	76.5	10/13/1994	SHALE		DOMESTIC	40.480529	-81.073929
2549	340492	PERRY	41	18	9/16/1968	SANDSTONE	20	DOMESTIC	40.481808	-81.077102
2550	443601	PERRY	90	50	8/30/1972	SANDSTONE	3	DOMESTIC	40.479513	-81.064726
2551	875619	PERRY	238	56	8/3/1998	SHALE	10	DOMESTIC	40.476720	-81.046560

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2552	891136	PERRY	223	82	5/28/2000	SHALE	2	DOMESTIC	40.474580	-81.041810
2553	394387	PERRY	70	33	7/15/1971	SHALE	18	DOMESTIC	40.579589	-81.089752
2554	265594	PERRY	89	30		SHALE	15	DOMESTIC	40.579589	-81.089752
2555	492530	PERRY	127	54	9/13/1992	SANDSTONE		DOMESTIC	40.579589	-81.089752
2556	875640	PERRY	354	159	11/5/1998	SANDSTONE	2	AGRIC/IRRIG	40.469160	-81.056775
2557	283035	PERRY	146	128	12/21/1964	SHALE	8		40.490584	-81.090840
2558	716340	PERRY	164	97	2/4/1992	SHALE		DOMESTIC	40.490677	-81.091010
2559	1008102	PERRY	255	88	4/18/2014		13	DOMESTIC	40.494985	-81.082465
2560	612611	PERRY	196	28	8/19/1983	SHALE	4		40.494009	-81.054042
2561	844373	PERRY	75	39	8/13/1997	SHALE	10	DOMESTIC	40.491338	-81.053748
2562	891090	PERRY	135	50	5/14/1999	SANDSTONE	114	AGRIC/IRRIG	40.496940	-81.054850
2563	891111	PERRY	138	46	10/7/1999	SHALE	2	DOMESTIC	40.496940	-81.054850
2564	894284	PERRY	120	60	8/2/2000	SANDSTONE	4	DOMESTIC	40.493740	-81.053240
2565	797349	PERRY	135	55	10/12/1995	SANDSTONE	38	DOMESTIC	40.487655	-81.053223
2566	1008580	PERRY	106	81	7/3/2009	SANDSTONE	18	DOMESTIC	40.479830	-81.045900
2567	2087089	PERRY	300	149	6/29/2021	SANDSTONE		DOMESTIC	40.483960	-81.044720
2568	939306	PERRY	139	50	7/25/2002	SHALE		DOMESTIC	40.487500	-81.051950
2569	924863	PERRY	115	32	9/14/2001	SHALE	6	DOMESTIC	40.487668	-81.050971
2570	924879	PERRY	130	70	3/26/2003	SANDSTONE & SHALE	11	DOMESTIC	40.488523	-81.047668
2571	1019138	PERRY	125	70	3/14/2019	SANDSTONE	9	AGRIC/IRRIG	40.487369	-81.045713
2572	679141	PERRY	123	56	12/3/1988	CLAY & SHALE			40.470312	-81.055172
2573	891175	PERRY	354	171	2/25/2000	SHALE	2	AGRIC/IRRIG	40.472200	-81.056970
2574	476237	PERRY	115	90	9/2/1975	SANDSTONE	15	DOMESTIC	40.482658	-81.067890
2575	599262	PERRY	85	60	6/2/1982	SHALE	3	DOMESTIC	40.479947	-81.069466
2576	1011737	PERRY	250	127	8/12/2008	SHALE	3	DOMESTIC	40.483420	-81.066610
2577	825440	ROSE	200	181	7/18/1996	SHALE			40.616937	-81.108082
2578	89172	UNION	140	40	11/24/1951	SHALE	45	DOMESTIC	40.542216	-81.114759
2579	213513	UNION	75	50	10/10/1958	SHALE	35	DOMESTIC	40.556180	-81.055695
2580	368402	UNION	135	61	12/6/1967	SHALE	5		40.543961	-81.082759
2581	392691	UNION	74	12	9/20/1971	SHALE	46	DOMESTIC	40.551396	-81.084856
2582	400727	UNION	90	35	5/5/1970	SHALE	3	DOMESTIC	40.524547	-81.074444
2583	429261	UNION	75	45	3/8/1972	SHALE	30	DOMESTIC	40.498994	-81.076094
2584	429262	UNION	135	70	3/25/1972	SHALE	20	DOMESTIC	40.501965	-81.078704
2585	429287	UNION	45	28	9/13/1972	SHALE	19	DOMESTIC	40.495815	-81.074825
2586	528122	UNION	170	145	2/8/1980	SHALE	2	DOMESTIC	40.545493	-81.083836
2587	546124	UNION	100	60	10/10/1978	SHALE	21	DOMESTIC	40.531988	-81.075955

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2588	948565	UNION	188		2/6/2003	SHALE	3	HEATING/COOLING	40.568590	-81.084910
2589	883342	UNION	130	45	3/9/2000	SHALE	1	DOMESTIC	40.557436	-81.086619
2590	883310	UNION	70	21	12/4/1998	SHALE	35	DOMESTIC	40.554660	-81.085950
2591	480415	UNION	50	16	8/23/1975	SHALE	35	DOMESTIC	40.551925	-81.085301
2592	500324	UNION	85	35	12/13/1976	SHALE	4	DOMESTIC	40.551057	-81.085549
2593	930238	UNION	137	85	7/18/2002	CLEANOUT	110	DOMESTIC	40.553670	-81.084830
2594	1015643	UNION	92	44	7/22/2016	EXISTING WELL		DOMESTIC	40.548889	-81.082778
2595	1019149	UNION	150	50	11/14/2017	SANDSTONE	8	DOMESTIC	40.546794	-81.080963
2596	528119	UNION	84	60	2/8/1980	SHALE	38	DOMESTIC	40.547871	-81.082774
2597	781608	UNION	320	31	4/27/1994	FILL MATERIAL		DOMESTIC	40.546785	-81.082821
2598	858543	UNION	361	242	3/3/1998	SHALE		DOMESTIC	40.542140	-81.083510
2599	1015651	UNION	115	48	7/25/2014	SANDSTONE	1	DOMESTIC	40.545333	-81.084250
2600	930218	UNION	195	120	11/1/2001	CLEANOUT		DOMESTIC	40.541980	-81.083440
2601	802760	UNION	150	43	11/9/1994	SHALE	3	DOMESTIC	40.540803	-81.082284
2602	955617	UNION	225	130	5/25/2003	SHALE	1	DOMESTIC	40.540500	-81.082830
2603	612642	UNION	180	120	7/30/1984	SANDSTONE		DOMESTIC	40.544416	-81.085360
2604	493701	UNION	93	40	4/16/1976	SAND	2	DOMESTIC	40.533792	-81.078575
2605	612624	UNION	233	99	11/7/1983	SHALE		DOMESTIC	40.533792	-81.078575
2606	599265	UNION	55	35	7/26/1982	SHALE	8	DOMESTIC	40.532592	-81.078210
2607	488378	UNION	141	105	4/1/1976	SHALE	8	DOMESTIC	40.532150	-81.078774
2608	877501	UNION	200	69	5/25/1999	SHALE	6	DEWATERING	40.538450	-81.080910
2609	2030326	UNION	160	83	12/4/2010	SHALE	3	DOMESTIC	40.532410	-81.078950
2610	1014633	UNION	186	126	5/11/2011			AGRIC/IRRIG	40.528317	-81.080767
2611	963517	UNION			8/15/2004	OLD WELL		DOMESTIC	40.524880	-81.077450
2612	716321	UNION	166	108	11/7/1990	SANDSTONE	5	DOMESTIC	40.522948	-81.074137
2613	963537	UNION	255	120	7/15/2005		10	DOMESTIC	40.524340	-81.076010
2614	1015652	UNION	220	131	7/19/2014	SANDSTONE		DOMESTIC	40.520889	-81.073417
2615	522437	UNION	210	147	5/9/1978	SANDSTONE	4	DOMESTIC	40.519774	-81.072888
2616	2036315	UNION	175	62	1/23/2012	SHALE		DOMESTIC	40.529722	-81.083333
2617	829668	UNION	150	32	7/30/1996	SANDSTONE		DOMESTIC	40.510699	-81.072230
2618	932487	UNION	165	80	8/17/2002	EXISTING WELL		DOMESTIC	40.502000	-81.076670
2619	622407	UNION	121	70	10/15/1982	SHALE		DOMESTIC	40.496724	-81.073795
2620	844363	UNION	100	45	4/4/1997	SHALE	5	DOMESTIC	40.496329	-81.076075
2621	924855	UNION	150	72	6/9/2001	SANDSTONE	1	DOMESTIC	40.495460	-81.075290
2622	1022539	UNION	134	56	11/15/2023	SANDSTONE	11	DOMESTIC	40.495192	-81.069969
2623	757236	UNION	130	90	11/5/1992	SANDSTONE		DOMESTIC	40.487183	-81.072541

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
2624	125978	UNION	55	30	5/4/1955	SHALE	12	DOMESTIC	40.557791	-81.125753
2625	239980	UNION	105	75	6/12/1962	SAND	65	DOMESTIC	40.558388	-81.123685
2626	239987	UNION	106	25	5/25/1963	SHALE	40	DOMESTIC	40.554465	-81.126145
2627	283019	UNION	100	32	4/15/1964	SANDSTONE	3		40.558388	-81.123685
2628	387855	UNION	95	50	11/12/1968	SHALE	90	DOMESTIC	40.558388	-81.123685
2629	424386	UNION	99	56	10/15/1971	SHALE	4		40.558388	-81.123685
2630	370098	UNION	235	150	1/16/1980	SILTSTONE	95		40.558388	-81.123685
2631	534180	UNION	141	64	2/7/1980	SHALE		DOMESTIC	40.558388	-81.123685
2632	643625	UNION	291	175	6/11/1985	SHALE		DOMESTIC	40.558388	-81.123685
2633	695834	UNION	296	173	6/17/1989	SHALE		DOMESTIC	40.558703	-81.125111
2634	1008204	UNION	298	178	9/25/2007	SHALE	296	DOMESTIC	40.558500	-81.124667
2635	635645	UNION	125	70	10/6/1986	CLEANOUT		DOMESTIC	40.552934	-81.125133
2636	781598	UNION	142	54	1/21/1994	SHALE		AGRIC/IRRIG	40.552834	-81.124907
2637	930275	UNION	149	75	1/14/2003	SANDSTONE	2	AGRIC/IRRIG	40.565710	-81.123240
2638	987603	UNION	142	60	7/18/2005			DOMESTIC	40.552670	-81.125500
2639	2000828	UNION	300	104	12/22/2005	SHALE	3	DOMESTIC	40.565490	-81.123820
2640	2076160	UNION	172	97	10/1/2019	SANDSTONE	1	DOMESTIC	40.556667	-81.125667
2641	858536	UNION	297	123	12/4/1997	SHALE		DOMESTIC	40.556990	-81.085390
2642	942169	UNION	120	63	10/15/2002	CLAY & SHALE		DOMESTIC	40.558060	-81.082780
2643	1015632	UNION	115	38	10/29/2012	SANDSTONE	1	DOMESTIC	40.557361	-81.078972
2644	891172	UNION	340	102	3/25/2000	SHALE	2	DOMESTIC	40.558120	-81.079830
2645	368401	UNION	60	24	10/26/1967	SAND			40.512182	-81.096269
2646	644401	UNION	118	97	5/31/1984	SHALE		DOMESTIC	40.511923	-81.075295
2647	500336	UNION	106	63	4/11/1977	SANDSTONE	3	DOMESTIC	40.511849	-81.073373
2648	635609	UNION	147	95	5/10/1986	SANDSTONE	3	DOMESTIC	40.515959	-81.066834
2649	839118	UNION	112	72	11/3/1997	SANDSTONE		DOMESTIC	40.560270	-81.127200
2650	942152	UNION	120	70	1/29/2002	CLEANOUT	112	DOMESTIC	40.556000	-81.123170
2651	860202	UNION	100	80	9/6/1997	SANDSTONE	10	DOMESTIC	40.558244	-81.129415
2652	868894	UNION	80		7/8/1998	SHALE	7	DOMESTIC	40.559490	-81.127720
2653	942162	UNION	100	57	8/2/2002	SANDSTONE		DOMESTIC	40.559250	-81.128120
2654	103449	UNION	120	35	5/15/1954	SAND	65	DOMESTIC	40.529005	-81.094057
2655	106410	UNION	160	65	5/30/1953	SHALE	45	DOMESTIC	40.529005	-81.094057
2656	125960	UNION	60	20	7/14/1954	SHALE	25		40.540391	-81.056222
2657	125972	UNION	15	15	3/31/1955	SAND		DOMESTIC	40.538627	-81.067717
2658	160101	UNION	38	15	9/2/1955	SHALE	18	DOMESTIC	40.538400	-81.061465
2659	160129	UNION	80	45		SAND	30	DOMESTIC	40.522576	-81.099826

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
2660	325772	UNION	219	131	12/12/1966	SAND	8		40.533610	-81.088040
2661	340479	UNION	110	72	8/7/1967	SHALE	2		40.524813	-81.099952
2662	392670	UNION	69	18	7/23/1970	SHALE			40.539044	-81.060595
2663	411974	UNION	119	50	3/2/1971	SHALE	102	DOMESTIC	40.539548	-81.059122
2664	427544	UNION	60	30	4/23/1973	LIMESTONE		DOMESTIC	40.537996	-81.084195
2665	507551	UNION	110	80	5/20/1977	SHALE	38	DOMESTIC	40.531989	-81.091940
2666	507562	UNION	200	100	12/6/1977	SHALE	27	DOMESTIC	40.531518	-81.090025
2667	509477	UNION	192	140	10/11/1977	SHALE	15	DOMESTIC	40.530554	-81.090665
2668	617331	UNION	247	84	12/26/1985	SHALE			40.525010	-81.099970
2669	643636	UNION	238	164	8/10/1985	SHALE	2	DOMESTIC	40.539754	-81.074954
2670	903788	UNION	252	190	2/23/2000	SAND & ROCK	190	DOMESTIC	40.529700	-81.094240
2671	599258	UNION	90	50	10/10/1981	SANDSTONE	12	DOMESTIC	40.527579	-81.095817
2672	891127	UNION	261	190	1/14/2000	SAND & ROCK	197	DOMESTIC	40.529830	-81.094090
2673	1015654	UNION	175	89	10/11/2014	SANDSTONE	1	DOMESTIC	40.529167	-81.099444
2674	3006037	UNION	300	152	1/27/2023	SHALE	17	DOMESTIC	40.530630	-81.093750
2675	716344	UNION	264	160	3/5/1992	CLEANOUT		DOMESTIC	40.530124	-81.092261
2676	987617	UNION	206	122	10/6/2005			DOMESTIC	40.530830	-81.093500
2677	766964	UNION	259	179	5/19/1993	SANDSTONE		DOMESTIC	40.526006	-81.099112
2678	522439	UNION	210	154	5/22/1978	SHALE		DOMESTIC	40.529903	-81.092375
2679	930214	UNION	278	193	10/4/2001	CLEANOUT	234	DOMESTIC	40.530655	-81.090896
2680	1008223	UNION	282	172	5/23/2008	SHALE			40.524880	-81.099699
2681	839427	UNION	267	192	6/29/1996	CLEANOUT		DOMESTIC	40.534652	-81.087678
2682	671509	UNION	218	107	10/30/1987	SHALE	4	DOMESTIC	40.535953	-81.085447
2683	930209	UNION	265	88	8/16/2001	OLD WELL		DOMESTIC	40.518756	-81.101233
2684	450569	UNION	306	108	7/17/1973	SHALE	2		40.537618	-81.085867
2685	679117	UNION	357	160	9/10/1988	SHALE		DOMESTIC	40.536957	-81.085761
2686	2025700	UNION	259	130	1/6/2010	SHALE		DOMESTIC	40.538167	-81.085333
2687	750758	UNION	125	41	9/15/1992	SANDSTONE	12	DOMESTIC	40.538049	-81.085122
2688	858903	UNION	275	196	7/29/1997	SHALE	7	DOMESTIC	40.538524	-81.073558
2689	643640	UNION	299	124	9/16/1985	SHALE	4	DOMESTIC	40.539768	-81.072115
2690	866806	UNION	142	76	12/9/1999	SHALE	6	DOMESTIC	40.538910	-81.072290
2691	924852	UNION	180	40	4/25/2001	SHALE & SANDSTONE	6	DOMESTIC	40.537670	-81.066330
2692	963528	UNION	300	30	4/15/2005		4	DOMESTIC	40.539419	-81.065435
2693	2005283	UNION	105	30	8/23/2006	SHALE	11	DOMESTIC	40.539183	-81.068183
2694	2007160	UNION	105	30	8/23/2006	SHALE	11	DOMESTIC	40.539183	-81.068183
2695	753171	UNION	212	30	3/10/1995	SHALE		DOMESTIC	40.538961	-81.060944

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2696	866801	UNION	160	60	6/1/1998	SHALE		DOMESTIC	40.540343	-81.055841
2697	480422	UNION	50	20	10/15/1975	CLAY & SHALE	15	DOMESTIC	40.551074	-81.112814
2698	578662	UNION	157	81	10/20/1981	SHALE		DOMESTIC	40.556160	-81.103655
2699	507568	UNION	95		5/26/1978	SHALE		DOMESTIC	40.556160	-81.103655
2700	624956	UNION	88	57	7/21/1986	SANDSTONE			40.552999	-81.105843
2701	716277	UNION	179	104	7/25/1991	SHALE	12	DOMESTIC	40.555729	-81.106066
2702	653695	UNION	52	27	11/21/1988	LIMESTONE	22	DOMESTIC	40.550986	-81.112258
2703	464237	UNION	86	57	7/10/1974	SAND	4	DOMESTIC	40.556117	-81.083894
2704	477480	UNION	86	44	1/29/1976	SHALE	3	DOMESTIC	40.555426	-81.082978
2705	858524	UNION	112	54	10/2/1997	SHALE		DOMESTIC	40.555480	-81.083240
2706	500322	UNION	142	100	12/9/1976	SHALE		DOMESTIC	40.554595	-81.083698
2707	764544	UNION	150		12/13/1993	SHALE	8	DOMESTIC	40.554623	-81.083222
2708	747181	UNION	248	160	4/25/1992	SHALE		DOMESTIC	40.642495	-81.080299
2709	2071471	UNION	140	47	12/14/2018	SHALE	2	DOMESTIC	40.556060	-81.082470
2710	493747	UNION	78	38	2/13/1977	SHALE	3		40.555942	-81.081874
2711	635624	UNION	80	33	6/26/1986	SHALE		DOMESTIC	40.555942	-81.081874
2712	103432	UNION	161	120	10/28/1953	SAND	18	DOMESTIC	40.547765	-81.073703
2713	356173	UNION	54	18	6/19/1967	SAND		DOMESTIC	40.538484	-81.069578
2714	449833	UNION	61	40	10/11/1973	SHALE		DOMESTIC	40.531014	-81.065564
2715	474200	UNION	50	30	1/9/1976	SHALE	30	DOMESTIC	40.552979	-81.075914
2716	493354	UNION	50	30	3/23/1976	SHALE	12	DOMESTIC	40.553116	-81.076922
2717	493709	UNION	57	29	6/14/1976	SHALE	4	DOMESTIC	40.557316	-81.076797
2718	599274	UNION	95	50	5/20/1983	SANDSTONE		DOMESTIC	40.562744	-81.078694
2719	821177	UNION	200		7/20/1995	SHALE	18	DOMESTIC	40.557516	-81.078614
2720	1014648	UNION	239	106	12/20/2011	SHALE	3	DOMESTIC	40.557767	-81.077250
2721	938962	UNION	120	35	10/23/2002	SHALE	3	DOMESTIC	40.556570	-81.079270
2722	924871	UNION	105	63	10/2/2003	SANDSTONE & SHALE		DOMESTIC	40.551730	-81.076470
2723	955604	UNION	155	93	10/8/2002	SHALE		DOMESTIC	40.554166	-81.074166
2724	1006571	UNION	145	89	11/5/2005	SHALE		DOMESTIC	40.556940	-81.079170
2725	599270	UNION	69	19	9/27/1982	SHALE	39	DOMESTIC	40.551026	-81.075120
2726	481090	UNION	269	112	2/6/1976	SHALE		DOMESTIC	40.549825	-81.072666
2727	534168	UNION	135	49	6/18/1979	SHALE	4	DOMESTIC	40.549830	-81.072578
2728	2060198	UNION	105	52	11/17/2016	SHALE	22	DOMESTIC	40.546767	-81.074922
2729	802831	UNION	150	116	9/19/1995	SANDSTONE	3	DOMESTIC	40.545894	-81.071524
2730	888991	UNION	240		9/9/1999	SHALE	20	DOMESTIC	40.532790	-81.067270
2731	957292	UNION	124	14	7/3/2004	SHALE	2	DOMESTIC	40.529630	-81.066070

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2732	894299	UNION	205	40	5/10/2000	SHALE	4	DOMESTIC	40.525280	-81.064480
2733	844374	UNION	320	110	8/14/1997	SANDSTONE	11	DOMESTIC	40.534194	-81.067889
2734	894283	UNION	205	110	8/17/2000	SANDSTONE	12	DOMESTIC	40.521380	-81.062960
2735	894298	UNION	180	80	5/15/2000	SANDSTONE	4	DOMESTIC	40.520230	-81.062840
2736	924875	UNION	305	60	4/25/2003	SANDSTONE	7	DOMESTIC	40.520230	-81.062840
2737	798488	UNION	180	125	1/16/1995	SHALE		DOMESTIC	40.530646	-81.067919
2738	839102	UNION	94	52	7/4/1996	SHALE	3	DOMESTIC	40.529040	-81.064606
2739	1006065	UNION	255	113	4/11/2007	SHALE	5	DOMESTIC	40.528800	-81.061833
2740	875635	UNION	130	42	10/16/1998	SANDSTONE		DOMESTIC	40.513420	-81.062090
2741	858902	UNION	200	132	7/17/1997	SANDSTONE		DOMESTIC	40.516622	-81.063081
2742	396684	UNION	68	30	6/9/1971	SHALE		DOMESTIC	40.554052	-81.098218
2743	429255	UNION	79	35	1/11/1972	SHALE	5	DOMESTIC	40.553821	-81.095645
2744	477458	UNION	104	60	6/2/1975	SHALE			40.553931	-81.096523
2745	480406	UNION	85	45	5/27/1975	SHALE		DOMESTIC	40.553728	-81.094211
2746	480429	UNION	75	30	3/11/1976	SHALE		DOMESTIC	40.553788	-81.095025
2747	493352	UNION	105	60	2/9/1976	SHALE	35	DOMESTIC	40.551238	-81.098310
2748	641777	UNION	92	59	8/24/1986	SANDSTONE		DOMESTIC	40.552745	-81.095243
2749	757226	UNION	87	40	6/30/1992	SANDSTONE	32	DOMESTIC	40.552741	-81.091030
2750	3010097	UNION	78	7	8/23/2023	SANDSTONE	38	DOMESTIC	40.552740	-81.091030
2751	3000606	UNION	85	19	4/14/2022	SHALE	24	DOMESTIC	40.553639	-81.098959
2752	671547	UNION	112	42	6/18/1988	SHALE		DOMESTIC	40.550317	-81.087191
2753	464236	UNION	124	96	7/5/1974	SHALE	4	DOMESTIC	40.554595	-81.083698
2754	477451	UNION	272	50	12/10/1974	SHALE	6	DOMESTIC	40.557559	-81.080349
2755	477460	UNION	157	90	6/30/1975	SANDSTONE			40.501458	-81.070009
2756	509470	UNION	85		9/22/1977	SANDSTONE	42	DOMESTIC	40.501965	-81.078704
2757	1008076	UNION	132	37	11/19/2012	SHALE	18	DOMESTIC	40.501650	-81.078833
2758	2010197	UNION	459	190	6/8/2007	SANDSTONE	9	DOMESTIC	40.499833	-81.073667
2759	687159	UNION	250	85	9/15/1988	SHALE	28	DOMESTIC	40.499732	-81.070091
2760	679108	UNION	132	48	8/8/1988	CLAY & SHALE		DOMESTIC	40.504501	-81.061273
2761	325774	UNION	70	29	4/17/1967	SAND	29		40.511192	-81.094757
2762	1021461	UNION	126	33	5/25/2023	SANDSTONE		DOMESTIC	40.510983	-81.094797
2763	940736	UNION	250	178	8/8/2002	LOAM	1	DOMESTIC	40.509960	-81.090720
2764	829722	UNION	200	102	7/1/1997	SHALE	3	DOMESTIC	40.500897	-81.091545
2765	883727	UNION	350	151	8/19/1998	SANDSTONE	1	DOMESTIC	40.497605	-81.090007
2766	829690	UNION	150	55	10/25/1996	SANDSTONE	2	DOMESTIC	40.497256	-81.085264
2767	860223	UNION	350	154	8/17/1998	SANDSTONE	1	DOMESTIC	40.495774	-81.087140

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2768	115728	UNION	528	140	10/24/1956	SANDSTONE			40.503645	-81.100573
2769	877523	UNION	100	46	8/26/1999	SHALE	12	AGRIC/IRRIG	40.494640	-81.093590
2770	829697	UNION	200	102	12/4/1996	SANDSTONE		DOMESTIC	40.543375	-81.107431
2771	955606	UNION	275	148	1/10/2003	SANDSTONE	14	DOMESTIC	40.542130	-81.118040
2772	695837	UNION	134	55	6/26/1989	SHALE	8	DOMESTIC	40.500212	-81.078621
2773	924891	UNION	255	95	7/2/2002	SANDSTONE	14	DOMESTIC	40.499150	-81.079800
2774	1008090	UNION	255	64	2/12/2017	SANDSTONE	2	DOMESTIC	40.497390	-81.079341
2775	802780	UNION	200	38	3/30/1995	SANDSTONE	4	DOMESTIC	40.496606	-81.081111
2776	1016787	UNION	266	62	7/2/2013	SANDSTONE		DOMESTIC	40.496767	-81.080983
2777	829699	UNION	175	26	1/7/1997	SANDSTONE	11	DOMESTIC	40.495772	-81.081324
2778	866820	UNION	235	92	1/29/2001	CLAY & SHALE		DOMESTIC	40.495170	-81.082500
2779	671525	UNION	150	84	12/24/1987	CLEANOUT		DOMESTIC	40.495018	-81.082395
2780	790957	UNION	100	31	8/15/1994	SANDSTONE		DOMESTIC	40.496015	-81.085789
2781	1002437	UNION	88	29	10/6/2006	SANDSTONE & SHALE	4	DOMESTIC	40.501000	-81.078330
2782	184998	UNION	40	15	6/22/1958	SHALE		DOMESTIC	40.542025	-81.101143
2783	283038	UNION	183	140	1/16/1965	SHALE	8		40.524581	-81.093205
2784	411991	UNION	110	50	6/15/1971	SHALE			40.541652	-81.097536
2785	509475	UNION	280	125	10/4/1977	SHALE	4	DOMESTIC	40.525119	-81.094499
2786	573721	UNION	153	84	1/14/1981	SHALE		DOMESTIC	40.531770	-81.096348
2787	578661	UNION	302	95	10/20/1981	SANDSTONE			40.544249	-81.104137
2788	839448	UNION	188	145	10/23/1996	CLEANOUT		DOMESTIC	40.532236	-81.095527
2789	752292	UNION	259	191	7/16/1992	CLEANOUT		DOMESTIC	40.530714	-81.094476
2790	601508	UNION	84	33.5	7/13/1981	SHALE	6	DOMESTIC	40.526435	-81.096004
2791	659074	UNION	162	96	5/26/1987	SANDSTONE	25		40.517386	-81.093488
2792	243339	UNION	120	73	12/26/1959	SHALE	4	DOMESTIC	40.554949	-81.099585
2793	390913	UNION	87	30	6/17/1969	CLAY & SHALE		DOMESTIC	40.551791	-81.102801
2794	427269	UNION	96	50	10/2/1972	SHALE			40.559352	-81.096448
2795	427521	UNION	85	30	7/14/1972	SHALE	6		40.532320	-81.114937
2796	449844	UNION	224	144	5/7/1974	SHALE		DOMESTIC	40.532562	-81.112257
2797	458301	UNION	103	56	6/25/1973	SHALE		DOMESTIC	40.559794	-81.095917
2798	802819	UNION	75	11	8/10/1995	ROCK	16	AGRIC/IRRIG	40.562750	-81.097523
2799	598792	UNION	91	40	7/14/1983	SANDSTONE	23	DOMESTIC	40.558986	-81.095053
2800	752297	UNION	210	96	8/3/1992	SANDSTONE	38	DOMESTIC	40.548735	-81.101109
2801	3011975	UNION	269	133	11/30/2023	SHALE		DOMESTIC	40.539722	-81.103611
2802	599255	UNION	105	30	7/18/1981	SHALE	3	DOMESTIC	40.537396	-81.108339
2803	721704	UNION	172	48	12/12/1990	CLEANOUT		DOMESTIC	40.537440	-81.108349

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
2804	738013	UNION	200	56	9/24/1991	SANDSTONE	12	DOMESTIC	40.537458	-81.108382
2805	708576	UNION	174	58	1/9/1990	CLEANOUT		DOMESTIC	40.536708	-81.109130
2806	1008230	UNION	255	143	7/30/2008	SANDSTONE	1	DOMESTIC	40.536000	-81.108833
2807	1002459	UNION	265	205	7/24/2007	SHALE		DOMESTIC	40.530333	-81.113333
2808	1002442	UNION	269	191	11/15/2006	SANDSTONE	200	DOMESTIC	40.527333	-81.111250
2809	507556	UNION	87	30	9/3/1977	SHALE		DOMESTIC	40.536421	-81.110121
2810	507557	UNION	95	25	9/19/1977	CLAY & SHALE		DOMESTIC	40.536730	-81.110931
2811	507566	UNION	135	80	5/1/1978	CLAY & SHALE		DOMESTIC	40.543683	-81.104769
2812	507570	UNION	126	40	7/6/1978	SHALE		DOMESTIC	40.538900	-81.112836
2813	507590	UNION	217	75	7/11/1979	LIMESTONE	3	DOMESTIC	40.538366	-81.112332
2814	2040905	UNION	300	187	11/7/2012	SANDSTONE	3	DOMESTIC	40.530182	-81.113803
2815	480411	UNION	100	55	7/15/1975	SHALE		DOMESTIC	40.558412	-81.056919
2816	598796	UNION	196	145	10/10/1983	SANDSTONE		DOMESTIC	40.557110	-81.060308
2817	891083	UNION	228	86	3/31/1999	LIMESTONE	86	DOMESTIC	40.536630	-81.109450
2818	987604	UNION	374	213	7/28/2005			DOMESTIC	40.539000	-81.112670
2819	861094	UNION	100	55	5/3/1999	SHALE		DOMESTIC	40.537110	-81.110010
2820	1006553	UNION	195	90	12/12/2009	SHALE	1	DOMESTIC	40.537110	-81.110010
2821	622528	UNION	150	110	10/25/1983	SANDSTONE	5		40.539088	-81.113942
2822	2025164	UNION	375	216	11/24/2009	SANDSTONE		DOMESTIC	40.539333	-81.113333
2823	52658	WASHINGTON	71		10/12/1948	SHALE	2		40.594502	-80.988137
2824	92684	WASHINGTON	65	35		SHALE		DOMESTIC	40.603836	-81.044134
2825	125971	WASHINGTON	52	20	10/23/1954	SAND		DOMESTIC	40.625543	-81.058673
2826	125982	WASHINGTON	350	60	6/6/1955	SHALE	50		40.605855	-81.030497
2827	125983	WASHINGTON	55	40	6/9/1955	SAND	18		40.605855	-81.030497
2828	9910020	WASHINGTON	239		1/1/1939	COAL	29		40.619296	-81.066557
2829	269303	WASHINGTON	98	12	8/10/1961	SHALE	18		40.619884	-81.081184
2830	241465	WASHINGTON	72	35		SHALE	42	DOMESTIC	40.607991	-81.085840
2831	318414	WASHINGTON	216		10/26/1964	SANDSTONE	38	DOMESTIC	40.633458	-81.054928
2832	509461	WASHINGTON	62	45	6/5/1977	SHALE		DOMESTIC	40.617707	-80.983963
2833	396694	WASHINGTON	194	115		SHALE		DOMESTIC	40.617935	-81.029374
2834	390935	WASHINGTON	100	60	10/16/1970	SHALE		DOMESTIC	40.638194	-81.024146
2835	427282	WASHINGTON	148	100	9/27/1973	SHALE		DOMESTIC	40.631015	-81.026989
2836	601513	WASHINGTON	156	103	8/5/1981	SHALE	4	DOMESTIC	40.593637	-81.049264
2837	1021429	WASHINGTON	313	168	11/6/2020	SANDSTONE		DOMESTIC	40.593390	-81.049211
2838	671865	WASHINGTON	81	42	10/11/1988	SHALE		DOMESTIC	40.598553	-81.048336
2839	626192	WASHINGTON	118	62	11/26/1985	SHALE	4	DOMESTIC	40.598248	-81.046236

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2840	480433	WASHINGTON	35	6	5/4/1976	SHALE	28	DOMESTIC	40.601347	-81.041995
2841	507596	WASHINGTON	241	160	10/27/1979	SHALE	3	DOMESTIC	40.606889	-81.039238
2842	875638	WASHINGTON	149	111	10/31/1998	OLD WELL		DOMESTIC	40.640530	-81.019210
2843	799310	WASHINGTON	163	93	4/1/1995	SHALE	2	DOMESTIC	40.631709	-81.030084
2844	965333	WASHINGTON	250	142	4/29/2004	SHALE		DOMESTIC	40.640700	-81.018730
2845	598764	WASHINGTON	131	85	9/25/1981	SHALE	22	DOMESTIC	40.634198	-81.027440
2846	987635	WASHINGTON	137	84	11/5/2004			DOMESTIC	40.634170	-81.029500
2847	930208	WASHINGTON	180	116	8/9/2001	SHALE		DOMESTIC	40.641080	-81.017630
2848	598767	WASHINGTON	117	55	10/26/1981	SHALE		DOMESTIC	40.635243	-81.026140
2849	659070	WASHINGTON	193	90	4/13/1986	SHALE	1		40.635243	-81.026140
2850	3002497	WASHINGTON	171	120	7/12/2022	SANDSTONE	2	DOMESTIC	40.635098	-81.027204
2851	1021421	WASHINGTON	210	100	2/3/2020	SANDSTONE		DOMESTIC	40.635466	-81.027061
2852	891153	WASHINGTON	223	75	10/24/2000	SHALE		DOMESTIC	40.641590	-81.016920
2853	671520	WASHINGTON	205	94	12/2/1987	SHALE		DOMESTIC	40.638327	-81.023977
2854	930264	WASHINGTON	207	91	5/15/2003	CLEANOUT		DOMESTIC	40.641880	-81.015510
2855	965331	WASHINGTON	104	24	4/20/2004	SHALE	62	DOMESTIC	40.644793	-81.019987
2856	2088204	WASHINGTON	200	63	8/13/2021	SHALE	12	AGRIC/IRRIG	40.598510	-81.048260
2857	1014632	WASHINGTON	300	82	4/25/2011			AGRIC/IRRIG	40.643750	-80.990600
2858	223174	WASHINGTON	212	70		SHALE		DOMESTIC	40.577772	-80.989677
2859	273734	WASHINGTON	82	45		SHALE	65	DOMESTIC	40.574689	-81.009292
2860	336357	WASHINGTON	150	85	5/4/1966	SHALE		DOMESTIC	40.579688	-81.013503
2861	339941	WASHINGTON	70	45	6/12/1966	SHALE		DOMESTIC	40.579079	-81.000660
2862	356155	WASHINGTON	110	67	11/9/1966	SHALE	20	DOMESTIC	40.578694	-80.977647
2863	356195	WASHINGTON	76	50	8/3/1967	SHALE & SANDSTONE		DOMESTIC	40.578919	-80.994664
2864	387870	WASHINGTON	85	45	3/10/1969	SHALE	4	DOMESTIC	40.578706	-80.998359
2865	427526	WASHINGTON	125	60	9/27/1972	SHALE		DOMESTIC	40.579307	-80.985024
2866	480401	WASHINGTON	90	45	4/19/1975	CLAY & SHALE		DOMESTIC	40.579363	-80.984359
2867	507561	WASHINGTON	132	80	11/1/1977	SHALE		DOMESTIC	40.579363	-80.984359
2868	522354	WASHINGTON	152	13	4/23/1978	SHALE	8	DOMESTIC	40.578344	-80.988657
2869	528109	WASHINGTON	237	37	12/15/1978	CLAY & SHALE	3	DOMESTIC	40.579650	-80.992401
2870	528110	WASHINGTON	103	43	12/15/1978	SHALE	6		40.578531	-80.990364
2871	959534	WASHINGTON	340	80	1/14/2003	SANDSTONE & SHALE	8	DOMESTIC	40.579420	-81.016430
2872	802843	WASHINGTON	250	71	11/6/1995	SHALE		DOMESTIC	40.581613	-81.004618
2873	839120	WASHINGTON	200	125	12/27/1997	SHALE	3	DOMESTIC	40.579720	-81.016220
2874	844368	WASHINGTON	300	140	6/7/1997	SANDSTONE	2	DOMESTIC	40.581726	-81.003254
2875	772463	WASHINGTON	325	110	11/6/1993	COAL	4	DOMESTIC	40.578729	-81.001307

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2876	898290	WASHINGTON	141	63	8/1/2001	SHALE	16	DOMESTIC	40.579960	-81.015220
2877	894277	WASHINGTON	255	38	3/13/2000	SANDSTONE	8	DOMESTIC	40.579840	-81.014510
2878	868850	WASHINGTON	160	40	4/10/1998	SHALE	7	DOMESTIC	40.580190	-81.014280
2879	751126	WASHINGTON	102	48	5/26/1992	SHELL	2	DOMESTIC	40.579396	-80.995646
2880	877464	WASHINGTON	200	17	11/12/1998	SANDSTONE	2	DOMESTIC	40.581480	-81.003200
2881	671891	WASHINGTON	212	80	5/21/1990	SHALE	114	DOMESTIC	40.577841	-80.990147
2882	875648	WASHINGTON	216	94	2/8/1999	OLD WELL		DOMESTIC	40.581030	-81.003070
2883	877468	WASHINGTON	200		11/20/1998	SHALE	10	DOMESTIC	40.580350	-81.002350
2884	882671	WASHINGTON	200	57	11/14/1998	SANDSTONE		DOMESTIC	40.580260	-81.002690
2885	2080172	WASHINGTON	215	79	6/24/2020	SANDSTONE		DOMESTIC	40.573833	-80.983333
2886	995175	WASHINGTON	185	77	12/6/2005	SHALE	7	DOMESTIC	40.574650	-80.979980
2887	609580	WASHINGTON	83	27	12/24/1983	SHALE	5	DOMESTIC	40.579002	-80.978982
2888	615913	WASHINGTON	83	27	4/18/1984	SHALE	5	DOMESTIC	40.579002	-80.978982
2889	864040	WASHINGTON	118	28	4/16/1998	SHALE	15	DOMESTIC	40.579020	-81.001640
2890	103424	WASHINGTON	81	25	8/13/1953	SHALE	13	DOMESTIC	40.615157	-81.079549
2891	493398	WASHINGTON	63	40	3/30/1977	SANDSTONE	14	DOMESTIC	40.642407	-81.039723
2892	2036991	WASHINGTON	240		3/26/2012	SHALE	6	MONITOR	40.641490	-81.050990
2893	2036993	WASHINGTON	140		3/27/2012	SHALE	7	MONITOR	40.642200	-81.051580
2894	2036994	WASHINGTON	100		3/27/2012	SHALE	12	MONITOR	40.641540	-81.052220
2895	2036995	WASHINGTON	80		3/29/2012	SANDSTONE	12	MONITOR	40.640930	-81.051600
2896	721462	WASHINGTON	115	20	8/1/1991	SHALE		DOMESTIC	40.631398	-81.064449
2897	839470	WASHINGTON	152	24	6/17/1997	SANDSTONE	109	DOMESTIC	40.631398	-81.064449
2898	665184	WASHINGTON	85	20	10/12/1987	SHALE	25	DOMESTIC	40.634348	-81.060073
2899	942174	WASHINGTON	175	94	1/7/2003	SANDSTONE	1	DOMESTIC	40.630830	-81.143060
2900	695840	WASHINGTON	237	163	7/10/1989	SANDSTONE		DOMESTIC	40.633792	-81.054993
2901	2044330	WASHINGTON	159	34	1/29/2013	SANDSTONE & SHALE	14	MONITOR	40.630401	-81.053331
2902	2044331	WASHINGTON	299	134	1/30/2013	SANDSTONE	28	MONITOR	40.630037	-81.053070
2903	610407	WASHINGTON	77	27	11/17/1984	LIMESTONE	4	DRY/NO WATER	40.636396	-81.055296
2904	601526	WASHINGTON	91	32	3/3/1982	SHALE	32	DOMESTIC	40.636663	-81.054707
2905	956842	WASHINGTON	85	26	7/10/2003	SANDSTONE	4	DOMESTIC	40.636936	-81.053200
2906	716300	WASHINGTON	154	28	10/24/1991	SHALE	28	DOMESTIC	40.637326	-81.052180
2907	820067	WASHINGTON	150	66	2/23/1996	SANDSTONE	1	DOMESTIC	40.639745	-81.049232
2908	716308	WASHINGTON	108	42	8/4/1990	CLEANOUT		DOMESTIC	40.640641	-81.048056
2909	967760	WASHINGTON	175	51	10/7/2003	SHALE		DOMESTIC	40.640830	-81.041390
2910	891107	WASHINGTON	162	82	9/1/1999	SHALE	3	DOMESTIC	40.642697	-81.039554
2911	1009793	WASHINGTON	130	82	12/15/2008		1	DOMESTIC	40.640380	-81.048980

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2912	367361	WASHINGTON	110	80	7/29/1967	SANDSTONE		DOMESTIC	40.638608	-81.052252
2913	367362	WASHINGTON	62	31	8/2/1967	SANDSTONE		DOMESTIC	40.638123	-81.053434
2914	420830	WASHINGTON	66	32	10/19/1971	SANDSTONE	17		40.636644	-81.056613
2915	464206	WASHINGTON	61	25	10/15/1973	SHALE	4	DOMESTIC	40.640685	-81.047784
2916	1008222	WASHINGTON	267	15	5/8/2008	SANDSTONE	4	AGRIC/IRRIG	40.633167	-81.053333
2917	935501	WASHINGTON	94	45	6/28/2002	SHALE & SANDSTONE		DOMESTIC	40.640600	-81.047140
2918	239961	WASHINGTON	78	25	10/10/1960	SHALE	20	DOMESTIC	40.598659	-81.047530
2919	318410	WASHINGTON	50	25	10/1/1964	SANDSTONE	40	DOMESTIC	40.610171	-81.017236
2920	382435	WASHINGTON	74	16	11/7/1968	SHALE		DOMESTIC	40.612269	-81.003792
2921	391418	WASHINGTON	95	36	9/4/1969	SANDSTONE	3	DOMESTIC	40.612269	-81.003792
2922	507600	WASHINGTON	269	150	6/6/1980	SHALE		DOMESTIC	40.603695	-81.032246
2923	598759	WASHINGTON	210	130	6/27/1992	SHALE			40.603231	-81.034228
2924	1014660	WASHINGTON	60	13	7/12/2012	LIMESTONE		AGRIC/IRRIG	40.611550	-81.003450
2925	514522	WASHINGTON	71	20	8/9/1977	SHALE	4	DOMESTIC	40.614093	-81.004349
2926	965338	WASHINGTON	134	30	6/30/2004	SHALE	28	DOMESTIC	40.600500	-81.040500
2927	1016799	WASHINGTON	257	125	6/12/2014	SHALE		DOMESTIC	40.603383	-81.034117
2928	839465	WASHINGTON	292	155	5/27/1997	SANDSTONE	269	DOMESTIC	40.603839	-81.032134
2929	930552	WASHINGTON	164	120	4/2/2001	SHALE	2	DOMESTIC	40.607400	-81.030700
2930	752278	WASHINGTON	154	36	5/4/1992	SHALE			40.605499	-81.030830
2931	2076211	WASHINGTON	71	22	8/25/2019	SHALE		DOMESTIC	40.610269	-81.018889
2932	2077279	WASHINGTON	71	22	8/25/2019	SHALE		DOMESTIC	40.610269	-81.018889
2933	747203	WASHINGTON	81	40	4/13/1993	SHALE	32	DOMESTIC	40.609903	-81.022888
2934	829644	WASHINGTON	300	99	2/1/1996	SHALE	3	DOMESTIC	40.614509	-81.024232
2935	945966	WASHINGTON	420	192	8/21/2003	SHALE		DOMESTIC	40.610100	-81.020870
2936	866814	WASHINGTON	75	16	9/30/2000	SHALE		DOMESTIC	40.609900	-81.020430
2937	2034853	WASHINGTON	360	140	10/6/2011	SHALE		DOMESTIC	40.613730	-81.021400
2938	902229	WASHINGTON	275	102	3/23/2000	SHALE	8	DOMESTIC	40.610190	-81.020430
2939	882669	WASHINGTON	300	196	12/23/1998	SANDSTONE	6	DOMESTIC	40.610230	-81.020240
2940	877454	WASHINGTON	200	84	9/30/1998	SHALE	8	DOMESTIC	40.610020	-81.019810
2941	829705	WASHINGTON	175	35	2/15/1997	SANDSTONE		DOMESTIC	40.611856	-81.016402
2942	2071448	WASHINGTON	200	79	11/21/2018	SANDSTONE		DOMESTIC	40.611369	-81.019625
2943	877503	WASHINGTON	175	77	5/25/1999	SANDSTONE	1	DOMESTIC	40.610370	-81.019280
2944	967756	WASHINGTON	60	6	9/12/2003	CLAY & SHALE		DOMESTIC	40.615830	-81.005830
2945	143758	WASHINGTON	78	60	5/5/1954	SHALE			40.637038	-81.012664
2946	143764	WASHINGTON	80	30	5/5/1954	SHALE	30	DOMESTIC	40.633304	-81.015686
2947	455406	WASHINGTON	180	82	5/25/1973	SHALE	4	DOMESTIC	40.624252	-80.989934

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2948	455421	WASHINGTON	195	115	7/12/1973	SHALE		DOMESTIC	40.623678	-80.989978
2949	371863	WASHINGTON	140	50	9/24/1988	SHALE		DOMESTIC	40.609753	-80.994081
2950	747183	WASHINGTON	166	80	5/4/1992	SANDSTONE	2	DOMESTIC	40.611447	-80.992177
2951	2026322	WASHINGTON	92	12	3/12/2010	SHALE & SANDSTONE	14	DOMESTIC	40.613367	-80.991183
2952	744338	WASHINGTON	100	28	10/19/1992	SANDSTONE		DOMESTIC	40.612492	-80.990603
2953	881494	WASHINGTON	218	86	10/29/1998	LIMESTONE		DOMESTIC	40.620100	-80.989700
2954	781601	WASHINGTON	198	113	2/16/1994	OLD WELL		DOMESTIC	40.623374	-80.990219
2955	687875	WASHINGTON	90	20	11/6/1989	SHALE	27		40.624902	-80.991299
2956	2047959	WASHINGTON	127	94	6/23/2014	SHALE		DOMESTIC	40.625211	-80.993534
2957	2050331	WASHINGTON	191	98	10/17/2014	EXISTING WELL		DOMESTIC	40.625211	-80.993534
2958	942267	WASHINGTON	71	27	8/11/2002	CLAY & SHALE		DOMESTIC	40.625070	-80.997180
2959	1012495	WASHINGTON	102	21	3/27/2010	SHALE		DOMESTIC	40.630830	-80.998670
2960	536026	WASHINGTON	80		3/3/1978	SANDSTONE	15	DOMESTIC	40.620801	-80.990198
2961	642373	WASHINGTON	93	40	6/1/1987	SHALE			40.630052	-81.012573
2962	2057625	WASHINGTON	249	130.2	6/27/2016			MONITOR	40.633333	-81.017917
2963	2057626	WASHINGTON	119	116	6/27/2016			MONITOR	40.633194	-81.020778
2964	679142	WASHINGTON	374	58	12/12/1988	SHALE	8	DOMESTIC	40.633471	-81.015987
2965	758336	WASHINGTON	285	174	9/18/1992	CLAY & SHALE	2	DOMESTIC	40.633482	-81.016010
2966	854802	WASHINGTON	285	100	7/23/1997	CLEANOUT		DOMESTIC	40.633482	-81.016010
2967	2090210	WASHINGTON	91	35	12/9/2021	SHALE	3	DOMESTIC	40.633711	-81.016519
2968	883338	WASHINGTON	64	8	5/16/2001	SHALE	15	DOMESTIC	40.638780	-81.016380
2969	905320	WASHINGTON	248	72	7/7/2000	SHALE		OTHER	40.620830	-80.989440
2970	213529	WASHINGTON	61	10	5/12/1959	SHALE	40	DOMESTIC	40.564451	-81.011249
2971	223196	WASHINGTON	102	30		SHALE	35	DOMESTIC	40.562894	-81.006276
2972	391434	WASHINGTON	373	84	10/30/1969	SHALE		DOMESTIC	40.561241	-80.993769
2973	641767	WASHINGTON	70	10	1/16/1984	SHALE	2	DOMESTIC	40.562578	-81.006879
2974	671541	WASHINGTON	88	33	5/21/1988	SHALE		DOMESTIC	40.562866	-81.006590
2975	2036609	WASHINGTON	60	38	2/20/2012	SHALE	12	DOMESTIC	40.561140	-80.997760
2976	971149	WASHINGTON	252	112	3/26/2005		10	DOMESTIC	40.561140	-80.993930
2977	1008209	WASHINGTON	150	42	11/13/2007	SHALE		DOMESTIC	40.558730	-80.989330
2978	883733	WASHINGTON	200	50	10/17/1998	SHALE		DOMESTIC	40.558430	-80.988950
2979	931777	WASHINGTON	230	101	5/17/2001	CLAY & SHALE		DOMESTIC	40.558410	-80.988930
2980	642374	WASHINGTON	106	70	7/17/1987	SANDSTONE	10		40.559504	-80.989582
2981	92676	WASHINGTON	90	50		SHALE			40.616613	-80.983955
2982	184990	WASHINGTON	87	60	4/29/1958	SAND	20		40.627067	-81.050873
2983	186905	WASHINGTON	200	140	11/23/1956	SAND	34	DOMESTIC	40.622022	-81.037041

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
2984	353830	WASHINGTON	198	165	5/16/1967	SANDSTONE		DOMESTIC	40.620706	-81.051622
2985	356157	WASHINGTON	100	30	11/11/1966	SAND		DOMESTIC	40.617485	-81.010820
2986	356703	WASHINGTON	50	29	11/17/1966	SHALE			40.620213	-80.996261
2987	396696	WASHINGTON	86	40	10/6/1971	SHALE	55	DOMESTIC	40.617153	-80.994335
2988	400702	WASHINGTON	205	165	9/23/1969	SAND			40.621647	-81.055717
2989	427255	WASHINGTON	180	115	4/14/1972	SHALE	105	DOMESTIC	40.620706	-81.051622
2990	427284	WASHINGTON	160	125	10/15/1973	SANDSTONE			40.620910	-81.046771
2991	507587	WASHINGTON	20	10	5/23/1979	SHALE	10	DOMESTIC	40.618188	-80.995263
2992	2083558	WASHINGTON	100	34	12/3/2020	SANDSTONE		INDUSTRIAL	40.620166	-81.065457
2993	1002431	WASHINGTON	224	160	8/18/2006		207	AGRIC/IRRIG	40.620180	-81.066330
2994	877509	WASHINGTON	200	89	6/25/1999	SHALE	3	DOMESTIC	40.620460	-81.066110
2995	493744	WASHINGTON	227	185	12/13/1976	SHALE	200	DOMESTIC	40.621647	-81.055717
2996	2039894	WASHINGTON	400	86.6	8/7/2012	SANDSTONE		FRACK WATER	40.617671	-81.039839
2997	2039646	WASHINGTON	220		8/3/2012	SANDSTONE & SHALE	12	MONITOR	40.621830	-81.037428
2998	963552	WASHINGTON	75	25	9/17/2006	SHALE	6	DOMESTIC	40.621730	-81.030400
2999	752280	WASHINGTON	298	46	5/25/1992	SHALE	25	DOMESTIC	40.621630	-81.023578
3000	2047151	WASHINGTON	300	106	4/14/2014	LIMESTONE	13	DOMESTIC	40.621944	-81.030278
3001	975163	WASHINGTON	85	25	5/28/2004	SANDSTONE & SHALE	6	DOMESTIC	40.615820	-81.009720
3002	982388	WASHINGTON	45	7	9/6/2004	SANDSTONE	18	DOMESTIC	40.616242	-81.006640
3003	613613	WASHINGTON	81	30	10/19/1984	SHALE		DOMESTIC	40.617153	-80.994335
3004	942263	WASHINGTON	143	67	7/21/2002	SANDSTONE	2	DOMESTIC	40.617220	-80.993870
3005	671898	WASHINGTON	206	120	9/24/1990	SANDSTONE	3	DOMESTIC	40.616473	-80.989321
3006	716322	WASHINGTON	150	93	11/7/1990	SHALE		DOMESTIC	40.618180	-80.983158
3007	671875	WASHINGTON	195	90	7/15/1989	SANDSTONE	18		40.617439	-80.981642
3008	1016789	WASHINGTON	196	68	9/16/2013	SHALE		DOMESTIC	40.617533	-80.979983
3009	1016778	WASHINGTON	177	77	3/1/2013	SANDSTONE	4	DOMESTIC	40.616417	-80.976717
3010	781587	WASHINGTON	147	87	11/19/1993	LIMESTONE		DOMESTIC	40.614450	-80.976364
3011	909959	WASHINGTON	159	94	7/17/2000	SHALE	147	DOMESTIC	40.613767	-80.976017
3012	1001191	WASHINGTON	229	110	3/26/2006	SHALE		DOMESTIC	40.616430	-80.991700
3013	2028788	WASHINGTON	280	151	9/8/2010	SHALE	8	DOMESTIC	40.614300	-81.068650
3014	839105	WASHINGTON	125	85	10/29/1996	SANDSTONE		DOMESTIC	40.609538	-81.089226
3015	1012469	WASHINGTON	265	84	7/27/2009	SANDSTONE & SHALE		DOMESTIC	40.610830	-81.091110
3016	752284	WASHINGTON		119.5	6/25/1992	SHALE		DOMESTIC	40.607676	-81.085525
3017	2053012	WASHINGTON	219	135.4	7/27/2015	SANDSTONE	14	MONITOR	40.606639	-81.085139
3018	2053013	WASHINGTON	99	57.5	7/27/2015	SANDSTONE	14	MONITOR	40.606694	-81.085139
3019	693786	WASHINGTON	83	45	1/30/1990	SHALE	16	DOMESTIC	40.609126	-81.083070

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
3020	615928	WASHINGTON	66	38	1/3/1986	SANDSTONE	18	DOMESTIC	40.609395	-81.083387
3021	635287	WASHINGTON	110	50	4/7/1988	COAL & CLAY		DOMESTIC	40.579589	-81.089752
3022	2046264	WASHINGTON	199	70	1/14/2014	SANDSTONE		MONITOR	40.608299	-81.062375
3023	2046265	WASHINGTON	79	48.3	1/14/2014	SANDSTONE & SHALE		MONITOR	40.608299	-81.062375
3024	955619	WASHINGTON	240	125	9/30/2006	SHALE		DOMESTIC	40.607500	-81.071667
3025	653697	WASHINGTON	73	41	11/22/1988	SANDSTONE	18	DOMESTIC	40.627143	-81.066219
3026	1012481	WASHINGTON	376	113	8/18/2010			DOMESTIC	40.625231	-81.067333
3027	799292	WASHINGTON	230	194	10/12/1994	CLEANOUT		DOMESTIC	40.627715	-81.066486
3028	3005092	WASHINGTON	200	48	12/2/2022	SANDSTONE	6	DOMESTIC	40.628577	-81.064751
3029	2036654	WASHINGTON	99	32	2/27/2012	SHALE		DOMESTIC	40.632122	-81.066094
3030	1021451	WASHINGTON	135	50	7/8/2022	SANDSTONE		PUBLIC/SEMI-PUB	40.634353	-81.064903
3031	874646	WASHINGTON	127	35	12/28/1998	SANDSTONE	11	DOMESTIC	40.657830	-81.055720
3032	854892	WASHINGTON	85	34	5/22/1998	SANDSTONE	3	DOMESTIC	40.657860	-81.055640
3033	877333	WASHINGTON	205	45	6/15/1998	SHALE		DOMESTIC	40.657620	-81.055460
3034	877331	WASHINGTON	145	85	6/9/1998	SANDSTONE & SHALE	10	DOMESTIC	40.638507	-81.065817
3035	875636	WASHINGTON	135	52	10/20/1998	SANDSTONE	1	DOMESTIC	40.637759	-81.064184
3036	957269	WASHINGTON	205	160	5/4/2003	SHALE	2	DOMESTIC	40.639570	-81.065020
3037	2025350	WASHINGTON	320	214	12/9/2009	SANDSTONE		DOMESTIC	40.639530	-81.064980
3038	2085236	WASHINGTON	140	58	2/28/2021	SHALE	12	DOMESTIC	40.638952	-81.065022
3039	930259	WASHINGTON	265	48	1/6/2003	SHALE & SANDSTONE	2	AGRIC/IRRIG	40.659150	-81.052060
3040	1014651	WASHINGTON	400	103	3/19/2012	SHALE		AGRIC/IRRIG	40.644050	-81.066350
3041	213548	WASHINGTON	62	20	10/24/1959	SHALE	30	DOMESTIC	40.632375	-81.069328
3042	223177	WASHINGTON	170	85		SAND	27		40.614065	-81.067879
3043	239955	WASHINGTON	156	130	7/20/1960	SAND	50	DOMESTIC	40.607366	-81.069009
3044	239967	WASHINGTON	72	20	7/20/1961	SHALE	60		40.634110	-81.068986
3045	241496	WASHINGTON	177	140		SANDSTONE	32		40.614065	-81.067879
3046	255390	WASHINGTON	205	130		SANDSTONE			40.603526	-81.066795
3047	289168	WASHINGTON	560	170	9/20/1967	SHALE	17		40.643828	-81.066901
3048	296891	WASHINGTON	184	140		SANDSTONE			40.614089	-81.066877
3049	427516	WASHINGTON	205	160	5/24/1972	SHALE	6	DOMESTIC	40.606582	-81.068363
3050	1012494	WASHINGTON	302	187	4/8/2010	SHALE & LIMESTONE		DOMESTIC	40.606590	-81.068930
3051	854882	WASHINGTON	145	39	4/23/1998	CLAY & SHALE	6	DOMESTIC	40.657750	-81.055130
3052	888995	WASHINGTON	240	104	9/4/1999	SHALE		DOMESTIC	40.657790	-81.055000
3053	1019859	WASHINGTON	180	130	10/21/2020	SANDSTONE	1	DOMESTIC	40.622940	-81.052599
3054	368419	WASHINGTON	120	80	8/26/1970	SAND	3		40.639291	-81.088689
3055	394384	WASHINGTON	195	160	6/24/1971	SHALE	18	DOMESTIC	40.627533	-81.066698

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3056	464186	WASHINGTON	70	45	7/3/1974	SANDSTONE	4	DOMESTIC	40.632354	-80.975377
3057	468475	WASHINGTON	156	25	7/6/1974	SHALE	6		40.625534	-81.058484
3058	507582	WASHINGTON	150	100	10/3/1978	SANDSTONE		DOMESTIC	40.628336	-81.074616
3059	516384	WASHINGTON	185	140	10/27/1977	SHALE		DOMESTIC	40.625631	-81.060601
3060	522435	WASHINGTON	62	25	4/17/1978	SHALE	20	DOMESTIC	40.640067	-81.087632
3061	712614	WASHINGTON	148	41	9/15/1990	SHALE	16	DOMESTIC	40.626900	-81.061785
3062	920820	WASHINGTON	235	140	12/5/2001	OLD WELL		DOMESTIC	40.626900	-81.061785
3063	938178	WASHINGTON	191	84	3/28/2002	SHALE	16	DOMESTIC	40.626905	-81.061787
3064	1019134	WASHINGTON	225	147	8/21/2018	SANDSTONE	2	DOMESTIC	40.627934	-81.073054
3065	668829	WASHINGTON	73	32	6/10/1988	SANDSTONE			40.626539	-81.063915
3066	877429	WASHINGTON	125	41	6/4/1998	SHALE	4	DOMESTIC	40.626224	-81.063252
3067	802782	WASHINGTON	150	41	3/30/1995	COAL	3	DOMESTIC	40.627086	-81.062780
3068	1011732	WASHINGTON	275	80	12/3/2008	SANDSTONE	3	DOMESTIC	40.623050	-81.054240
3069	772464	WASHINGTON	185	80	11/9/1993	SANDSTONE		DOMESTIC	40.627318	-81.064993
3070	516378	WASHINGTON	188	130	9/10/1977	SANDSTONE		DOMESTIC	40.622940	-81.052590
3071	495175	WASHINGTON	94	47	9/20/1976	COAL			40.625869	-81.070454
3072	608840	WASHINGTON	141	47	12/19/1983	SHALE			40.625869	-81.070454
3073	716272	WASHINGTON	193	147	7/1/1991	SHALE		DOMESTIC	40.625869	-81.070454
3074	612643	WASHINGTON	220	106	8/13/1984	SHALE	2	DOMESTIC	40.626375	-81.071501
3075	643616	WASHINGTON	141	135	3/11/1985	CORED		DOMESTIC	40.626375	-81.071501
3076	855298	WASHINGTON	47	13.5	4/17/1998	SHALE	8	DOMESTIC	40.623310	-81.055170
3077	708355	WASHINGTON	110	30	3/13/1990	SHALE	10	DOMESTIC	40.627603	-81.071085
3078	751150	WASHINGTON	145	108	12/30/1994	SHELL	2	DOMESTIC	40.625280	-81.072451
3079	811004	WASHINGTON	115	40	3/23/1996	SHELL	6	DOMESTIC	40.627453	-81.073606
3080	626198	WASHINGTON	179	131	2/10/1986	SHALE	2		40.628336	-81.074616
3081	833895	WASHINGTON	165	90	2/19/1997	SHALE	2	DOMESTIC	40.635488	-81.086513
3082	812778	WASHINGTON	165	50	7/28/1995	SHALE	2	OTHER	40.633467	-81.083831
3083	858924	WASHINGTON	150	51	10/24/1997	SHALE	3	DOMESTIC	40.632040	-81.079680
3084	2084716	WASHINGTON	260	118	2/12/2021	EXISTING WELL		DOMESTIC	40.641420	-81.089160
3085	829688	WASHINGTON	300	98	10/10/1996	SANDSTONE	3	DOMESTIC	40.634406	-81.085669
3086	891110	WASHINGTON	278	186	10/15/1999	SHALE		DOMESTIC	40.640970	-81.088960
3087	1012470	WASHINGTON	258	161	8/3/2009	SANDSTONE	4	DOMESTIC	40.633330	-81.090830
3088	820034	WASHINGTON	260	133	7/26/1995	SHALE	8	DOMESTIC	40.636193	-81.085831
3089	965320	WASHINGTON	255	139	11/25/2003	SHALE	10	DOMESTIC	40.634670	-81.087500
3090	803470	WASHINGTON	238	170	6/14/1997	SHALE	1	DOMESTIC	40.641590	-81.089930
3091	898848	WASHINGTON	340	150	11/30/1999	SHALE	10	DOMESTIC	40.641450	-81.090360

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3092	839110	WASHINGTON	214	154	2/13/1997	SHALE	10	DOMESTIC	40.636230	-81.089183
3093	839435	WASHINGTON	226	175	8/24/1996	SHALE	28	DOMESTIC	40.636942	-81.087209
3094	913031	WASHINGTON	285	101	7/27/2000	SANDSTONE	7	DOMESTIC	40.642020	-81.091010
3095	894278	WASHINGTON	150	100	5/31/2000	SHALE		DOMESTIC	40.642020	-81.091010
3096	799309	WASHINGTON	249	41.5	4/1/1995	SHALE	10	DOMESTIC	40.639589	-81.088078
3097	345910	WASHINGTON	125	12.5	5/27/1967	SHALE	26	TEST WELL	40.628620	-81.085130
3098	345913	WASHINGTON	125	18	8/22/1967	SANDSTONE	30	PUBLIC/SEMI-PUB	40.628540	-81.088360
3099	356171	WASHINGTON	64	35	6/5/1967	SAND		DOMESTIC	40.639040	-81.079332
3100	382412	WASHINGTON	73	50	8/10/1968	SANDSTONE	3	DOMESTIC	40.639716	-81.079210
3101	387865	WASHINGTON	125	65	2/28/1969	SHALE		DOMESTIC	40.613465	-81.079489
3102	400710	WASHINGTON	141	60	11/10/1969	SHALE	2	DOMESTIC	40.633637	-81.079613
3103	400732	WASHINGTON	70	40	6/9/1970	SHALE	3		40.613465	-81.079489
3104	400740	WASHINGTON	61	24	7/24/1970	SHALE	4		40.619619	-81.080907
3105	400742	WASHINGTON	121		7/31/1970	SHALE	6		40.619849	-81.081573
3106	424393	WASHINGTON	102	77	11/3/1971	SANDSTONE	4	DOMESTIC	40.641879	-81.083364
3107	432417	WASHINGTON	65	2	4/19/1972	SHALE	4	DOMESTIC	40.621936	-81.079730
3108	432418	WASHINGTON	159	90	4/26/1972	SAND	4		40.623065	-81.078875
3109	443621	WASHINGTON	100	65	10/19/1972	SHALE		DOMESTIC	40.621936	-81.079730
3110	480447	WASHINGTON	125	45	2/21/1977	CLAY & SHALE			40.626114	-81.079081
3111	534182	WASHINGTON	176	119	3/18/1980	SHALE	4	DOMESTIC	40.642153	-81.079896
3112	2069985	WASHINGTON	168	34.8	9/5/2018	SHALE & SANDSTONE	64	MUNICIPAL	40.628250	-81.089470
3113	578666	WASHINGTON	125	70	11/19/1981	SANDSTONE			40.609973	-81.077686
3114	679122	WASHINGTON	184	109	9/29/1988	SANDSTONE		DOMESTIC	40.633467	-81.079610
3115	798493	WASHINGTON	140	64	5/20/1995	SHALE	25	DOMESTIC	40.635167	-81.079980
3116	858507	WASHINGTON	238	109	8/12/1997	SHALE		DOMESTIC	40.635722	-81.080900
3117	810080	WASHINGTON	360	70	12/13/1995	SHALE	10	DOMESTIC	40.638163	-81.082061
3118	965323	WASHINGTON	108	55	12/10/2003	CLEANOUT	64	DOMESTIC	40.639500	-81.079500
3119	1008240	WASHINGTON	227	123	10/30/2008			DOMESTIC	40.635040	-81.079690
3120	772473	WASHINGTON	170	70	3/4/1994	SANDSTONE	12	DOMESTIC	40.644546	-81.079199
3121	2050314	WASHINGTON	399	117.5	11/4/2014	SHALE	20	MONITOR	40.643168	-81.075394
3122	2050326	WASHINGTON	259	150.8	11/5/2014	SANDSTONE		MONITOR	40.643208	-81.075402
3123	2050327	WASHINGTON	179	116.7	11/7/2014	SANDSTONE	12	MONITOR	40.643248	-81.075420
3124	839440	WASHINGTON	65	20	9/5/1996	CLEANOUT		DOMESTIC	40.644925	-81.075773
3125	2065454	WASHINGTON	240	100	11/10/2017	SHALE & SANDSTONE	2	DOMESTIC	40.637200	-81.082830
3126	1008216	WASHINGTON	104	26	1/10/2008	SHALE	4	DOMESTIC	40.585333	-81.047500
3127	143559	WASHINGTON	36	17	11/13/1954	SANDSTONE		DOMESTIC	40.631924	-80.990635

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3128	339917	WASHINGTON	64	25	11/26/1965	SHALE		DOMESTIC	40.590739	-80.998592
3129	353825	WASHINGTON	90			SANDSTONE	10	DOMESTIC	40.592306	-81.019247
3130	387885	WASHINGTON	120	40	7/7/1969	SHALE	3	DOMESTIC	40.591960	-81.041178
3131	387897	WASHINGTON	250	145	9/8/1969	SHALE	20		40.590554	-81.036398
3132	396688	WASHINGTON	130	42	7/15/1971	SHALE	42	DOMESTIC	40.591015	-81.010196
3133	455420	WASHINGTON	156	60	7/14/1973	SHALE		DOMESTIC	40.599211	-80.985025
3134	803439	WASHINGTON	192	100	6/20/1995	SHALE & COAL	1	DOMESTIC	40.624932	-80.989006
3135	718766	WASHINGTON	220	130	10/14/1991	SHALE		DOMESTIC	40.625866	-80.988925
3136	781579	WASHINGTON	123	45	10/18/1993	SHALE	14	DOMESTIC	40.626973	-80.989816
3137	2044324	WASHINGTON	230	59.4	7/18/2013	SHALE	16	MONITOR	40.628899	-80.988805
3138	2044325	WASHINGTON	160	56.4	7/19/2013	SHALE	14	MONITOR	40.628899	-80.988805
3139	2044326	WASHINGTON	125	56.6	7/19/2013	SHALE	13	MONITOR	40.628899	-80.988805
3140	2044327	WASHINGTON	70	56.6	7/18/2013	SHALE	16	MONITOR	40.628899	-80.988805
3141	942258	WASHINGTON	80	28	3/15/2002	SANDSTONE	3	AGRIC/IRRIG	40.627370	-80.986530
3142	206076	WASHINGTON	156	94	12/2/1957	SHALE	12	DOMESTIC	40.593162	-80.987715
3143	480432	WASHINGTON	90	50	4/28/1976	SHALE	2	DOMESTIC	40.593123	-81.026244
3144	493723	WASHINGTON	151	55	8/17/1976	SHALE	1		40.592691	-81.029068
3145	507554	WASHINGTON	150	110	7/16/1977	SHALE			40.592148	-81.033201
3146	593388	WASHINGTON	102	70	8/31/1976	SHALE	12	DOMESTIC	40.592081	-81.026995
3147	522428	WASHINGTON	250	175	11/25/1977	SHALE		DOMESTIC	40.589587	-81.042373
3148	659086	WASHINGTON	254	152	7/16/1987	OLD WELL		DOMESTIC	40.589587	-81.042373
3149	985779	WASHINGTON	440	120	12/2/2004		2	DOMESTIC	40.591400	-81.039480
3150	480450	WASHINGTON	177	75	5/17/1977	CLAY & SHALE	25		40.590329	-81.039119
3151	654446	WASHINGTON	374	200	8/31/1987	SANDSTONE		DOMESTIC	40.590329	-81.039119
3152	826988	WASHINGTON	350	165	12/2/1995	SANDSTONE		DOMESTIC	40.590518	-81.035931
3153	849730	WASHINGTON	631	287	8/11/1997	SAND	5	AGRIC/IRRIG	40.590513	-81.035941
3154	924873	WASHINGTON	405	217	6/26/2003	SANDSTONE & SHALE	1	DOMESTIC	40.592570	-81.029680
3155	858545	WASHINGTON	206	130	3/18/1998	SHALE		DOMESTIC	40.592700	-81.027020
3156	1019102	WASHINGTON	428	175	1/14/2016	SHALE		DOMESTIC	40.592267	-81.033417
3157	641752	WASHINGTON	205	55	5/14/1983	SHALE		DOMESTIC	40.593333	-81.030642
3158	826393	WASHINGTON	240	140	11/28/1995	SANDSTONE	55	DOMESTIC	40.594271	-81.029479
3159	507595	WASHINGTON	244	146	9/24/1979	FIRE CLAY	15	DOMESTIC	40.592681	-81.028001
3160	522379	WASHINGTON	145	75	8/6/1978	SAND	1	DOMESTIC	40.591963	-81.028240
3161	820060	WASHINGTON	177	136	11/11/1995	SHALE	12	DOMESTIC	40.592955	-81.026726
3162	839441	WASHINGTON	143	96	9/12/1996	SHALE		DOMESTIC	40.592369	-81.026652
3163	955564	WASHINGTON	135	90	12/3/2005			DOMESTIC	40.593770	-81.024240

#	Record Number	Township	Total Depth (ft)	Static Water Level (ft)	Completion Date	Aquifer Type	Depth to Bedrock (ft)	Well Use	Longitude (WGS 84)	Latitude (WGS 84)
3164	981444	WASHINGTON	155	44	8/3/2006	SANDSTONE & SHALE	5	DOMESTIC	40.593333	-81.021666
3165	803452	WASHINGTON	83	35	6/29/1996	SHALE		DOMESTIC	40.591026	-81.017177
3166	957276	WASHINGTON	80	40	9/18/2003	SHALE		DOMESTIC	40.586833	-81.012516
3167	1008287	WASHINGTON	267	80	4/1/2010	SHALE		DOMESTIC	40.590830	-81.007700
3168	716307	WASHINGTON	224	126	8/4/1990	SHALE	5	DOMESTIC	40.591815	-81.007153
3169	766999	WASHINGTON	163	61	10/11/1993	SHALE	2	DOMESTIC	40.595034	-81.002173
3170	766959	WASHINGTON	252	108	4/26/1993	SHALE	13	DOMESTIC	40.590489	-81.004473
3171	955567	WASHINGTON	175	120	7/1/2004		2	DOMESTIC	40.590990	-80.999500
3172	795248	WASHINGTON	76	20	1/23/1995	SANDSTONE		DOMESTIC	40.591370	-81.001744
3173	803442	WASHINGTON	176	85	8/19/1995	SANDSTONE	7	DOMESTIC	40.591982	-80.999973
3174	898276	WASHINGTON	161	51	6/25/1999	SANDSTONE	14	DOMESTIC	40.591480	-80.998240
3175	449836	WASHINGTON	60	50	11/20/1973	SHALE	17	DOMESTIC	40.592190	-80.997842
3176	866823	WASHINGTON	110	7	4/12/2001	CLAY & SHALE		DOMESTIC	40.591850	-80.997120
3177	3006281	WASHINGTON	215	51	2/14/2023	SANDSTONE	5	AGRIC/IRRIG	40.594844	-80.996307
3178	659096	WASHINGTON	224	63	8/21/1987	SHALE	2	DOMESTIC	40.598733	-80.986743
3179	716324	WASHINGTON	173	67	11/19/1990	SANDSTONE		DOMESTIC	40.598370	-80.985167
3180	858925	WASHINGTON	100	19	10/24/1997	SHALE	2	DOMESTIC	40.610330	-80.985470
3181	902218	WASHINGTON	100	21	1/20/2000	SHALE	7	DOMESTIC	40.610330	-80.985470
3182	952372	WASHINGTON	150		4/23/2003	LOAM	5	DOMESTIC	40.593330	-81.023540
3183	1016769	WASHINGTON	216	122	9/7/2012	SHALE		DOMESTIC	40.644617	-81.079067
3184	370054	WASHINGTON	173	130	9/18/1967	SANDSTONE	72	DOMESTIC	40.635459	-81.044929
3185	387857	WASHINGTON	70	20	11/20/1968	SHALE	28	DOMESTIC	40.628409	-81.036807
3186	396695	WASHINGTON	45	25	9/1/1971	LIMESTONE	27	DOMESTIC	40.630806	-81.042288
3187	411963	WASHINGTON	70	16	10/5/1970	SHALE			40.625756	-81.018669
3188	930223	WASHINGTON	149	24	1/18/2002	SHALE	2	DOMESTIC	40.639650	-81.044790
3189	2038849	WASHINGTON	150		7/31/2012	SHALE	15	HEATING/COOLING	40.642640	-81.058110
3190	2045818	WASHINGTON	215	152	7/22/2013	SHALE & SANDSTONE	14	DOMESTIC	40.636656	-81.044499
3191	877466	WASHINGTON	100	10	11/12/1998	SANDSTONE	15	DOMESTIC	40.630190	-81.036920
3192	909974	WASHINGTON	201	134	3/26/2001	CLEANOUT		DOMESTIC	40.674440	-81.044900
3193	877474	WASHINGTON	200	47	1/12/1999	SHALE	3	DOMESTIC	40.629410	-81.036890
3194	820056	WASHINGTON	148	31	10/28/1995	SHALE	36	DOMESTIC	40.627219	-81.037118
3195	679134	WASHINGTON	268	48	10/31/1988	SHALE	13	DOMESTIC	40.626119	-81.033200
3196	702356	WASHINGTON	359	125	9/30/1989	SANDSTONE	268	DOMESTIC	40.626207	-81.034339
3197	718770	WASHINGTON	133	45	11/18/1991	SHALE	27	AGRIC/IRRIG	40.628166	-81.025033
3198	671890	WASHINGTON	114	50	5/22/1990	SHALE		DOMESTIC	40.625906	-81.019826
3199	2089770	WASHINGTON	60	30	10/23/2021	SANDSTONE		DOMESTIC	40.625604	-81.018545

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3200	1008232	WASHINGTON	105	37	8/15/2008	SANDSTONE	4	DOMESTIC	40.625500	-81.014330
3201	854850	WASHINGTON	245	70	11/11/1997	SHALE	10	DOMESTIC	40.625630	-81.019860
3202	387898	WASHINGTON	65	31	9/9/1969	SAND		DOMESTIC	40.603971	-81.055950
3203	473183	WASHINGTON	88	12	6/29/1975	SANDSTONE		DOMESTIC	40.609670	-81.052942
3204	480448	WASHINGTON	46	15	3/9/1977	SANDSTONE		DOMESTIC	40.605700	-81.054399
3205	572356	WASHINGTON	79	25	6/9/1980	SAND		DOMESTIC	40.603022	-81.056040
3206	599266	WASHINGTON	60	24	8/7/1982	SANDSTONE		DOMESTIC	40.608842	-81.053186
3207	2048155	WASHINGTON	80	30	7/10/2014	SANDSTONE	18	DOMESTIC	40.610497	-81.052992
3208	1016798	WASHINGTON	123	18	5/23/2014	SHALE		DOMESTIC	40.611383	-81.012900
3209	206065	WASHINGTON	56	24		SHALE		DOMESTIC	40.590563	-80.993590
3210	509499	WASHINGTON	120	85	11/2/1978	SHALE	38	DOMESTIC	40.607517	-81.013602
3211	522399	WASHINGTON	49	10	11/16/1978	SHALE	8		40.591208	-80.993295
3212	795233	WASHINGTON	223	70	1/6/1997	SHALE		DOMESTIC	40.582707	-80.977839
3213	613608	WASHINGTON	81	38	7/14/1984	SHALE	15	DOMESTIC	40.581626	-80.977437
3214	955557	WASHINGTON	85	20	7/3/2003	SHALE	21	DOMESTIC	40.584150	-80.978700
3215	883320	WASHINGTON	200	13	9/28/1999	SANDSTONE		DOMESTIC	40.581180	-80.974380
3216	858920	WASHINGTON	200	78	10/11/1997	SANDSTONE	4	DOMESTIC	40.581590	-80.974920
3217	829717	WASHINGTON	200	82	6/17/1997	SANDSTONE	3	DOMESTIC	40.584116	-80.981530
3218	829707	WASHINGTON	175	48	3/7/1997	SHALE	1	DOMESTIC	40.582745	-80.985114
3219	802791	WASHINGTON	100	44	4/27/1995	SANDSTONE	4	DOMESTIC	40.586787	-80.985305
3220	829698	WASHINGTON	200	94	12/17/1996	SANDSTONE	8	DOMESTIC	40.586291	-80.988706
3221	908297	WASHINGTON	120	20	3/23/2000	SAND & ROCK	40	DOMESTIC	40.588900	-80.990300
3222	2064809	WASHINGTON	68	17	9/15/2017	SANDSTONE	8	DOMESTIC	40.602588	-81.009385
3223	3008553	WASHINGTON	60	10	6/23/2023	SANDSTONE	42	DOMESTIC	40.603260	-81.009290
3224	930269	WASHINGTON	254	59	6/23/2003	SHALE & LIMESTONE	5	DOMESTIC	40.596740	-80.992400
3225	721428	WASHINGTON	240	55	11/13/1991	SHALE		DOMESTIC	40.607660	-81.011748
3226	932488	WASHINGTON	300	57	8/17/2002	OLD WELL		DOMESTIC	40.597270	-80.992760
3227	820037	WASHINGTON	119	37	8/11/1995	SANDSTONE	12	DOMESTIC	40.609172	-81.013531
3228	1016773	WASHINGTON	75	18	10/19/2012	SHALE		DOMESTIC	40.611383	-81.012900
3229	891173	WASHINGTON	193	31	3/30/2000	SAND & ROCK		DOMESTIC	40.598980	-80.993600
3230	877445	WASHINGTON	200	107	9/21/1998	SHALE	5	DOMESTIC	40.604780	-80.997250
3231	963616	WASHINGTON	120	29	9/15/2003	SHALE	24	DOMESTIC	40.617720	-81.013500
3232	747217	WASHINGTON	82	25	6/29/1994	SHALE		DOMESTIC	40.631432	-80.985976
3233	527956	WASHINGTON	164	65	7/29/1978	SHALE		DOMESTIC	40.595750	-80.983572
3234	635633	WASHINGTON	158	68	8/9/1986	SANDSTONE	2	DOMESTIC	40.601924	-80.981185
3235	516381	WASHINGTON	200	125	10/1/1977	SANDSTONE		DOMESTIC	40.597981	-80.980910

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3236	659077	WASHINGTON	178	60	6/9/1987	SANDSTONE		DOMESTIC	40.597981	-80.980910
3237	273714	WASHINGTON	80	27		SHALE	52		40.564868	-81.001951
3238	325090	WASHINGTON	133	20	10/11/1966	SHALE	1		40.571103	-81.000154
3239	356154	WASHINGTON	138	65	11/1/1966	ROCK	5	DOMESTIC	40.576332	-81.001773
3240	368427	WASHINGTON	100	20	10/22/1971	SAND	1		40.569750	-81.002215
3241	458336	WASHINGTON	65	27	7/20/1974	SHALE	17	DOMESTIC	40.571860	-81.000916
3242	803427	WASHINGTON	155	45	10/25/1994	SHALE		DOMESTIC	40.572291	-81.000955
3243	615925	WASHINGTON	138	16	7/28/1984	LIMESTONE	19	DOMESTIC	40.569213	-81.001023
3244	721706	WASHINGTON	198		4/15/1991	SANDSTONE	8	DOMESTIC	40.568678	-81.001378
3245	516355	WASHINGTON	180	70	4/25/1977	SHALE		DOMESTIC	40.565822	-81.001914
3246	516383	WASHINGTON	182	80	10/19/1977	SHALE		DOMESTIC	40.565674	-81.003022
3247	747187	WASHINGTON	121	40	7/20/1992	SHALE		DOMESTIC	40.565932	-81.002118
3248	1008567	WASHINGTON	85	23	6/10/2008	SANDSTONE	4	DOMESTIC	40.564483	-81.003433
3249	767000	WASHINGTON	373	114	10/11/1993	SANDSTONE	2	DOMESTIC	40.586911	-81.001768
3250	781578	WASHINGTON	118	38	4/1/1949	SANDSTONE	12	DOMESTIC	40.586907	-81.001783
3251	955558	WASHINGTON	70	10	7/7/2003	SHALE	20	DOMESTIC	40.587780	-81.000500
3252	858539	WASHINGTON	104		1/22/1998	SHALE	28	DOMESTIC	40.584100	-80.998720
3253	671527	WASHINGTON	193	4	1/30/1988	SHALE	8	DOMESTIC	40.561246	-81.009417
3254	453771	WASHINGTON	95	35		SHALE	15		40.619514	-81.081510
3255	1019696	WASHINGTON	135	35	8/26/2017	SHALE		DOMESTIC	40.589047	-80.999550
3256	1002430	WASHINGTON	134	23	8/15/2006	SANDSTONE & SHALE		DOMESTIC	40.604667	-80.984833
3257	877497	WASHINGTON	200	92	5/1/1999	SHALE	2	DOMESTIC	40.639060	-81.025750
3258	671895	WASHINGTON	196	150	8/20/1990	SHALE	2		40.642722	-81.025635
3259	1004862	WASHINGTON	200	86	4/28/2010	SANDSTONE & SHALE	5	AGRIC/IRRIG	40.639320	-81.025270
3260	1012262	WASHINGTON	265	79	9/30/2010		9	DOMESTIC	40.644533	-81.026083
3261	659054	WASHINGTON	204	60	12/4/1986	SHALE		DOMESTIC	40.644589	-81.026647
3262	883737	WASHINGTON	156	52	11/10/1998	SANDSTONE	8	DOMESTIC	40.590720	-81.025910
3263	520508	WASHINGTON	125	70	6/14/1977	SHALE		DOMESTIC	40.593074	-81.024047
3264	803467	WASHINGTON	180	90	4/25/1997	SAND & ROCK		DOMESTIC	40.614490	-80.975010
3265	143594	WASHINGTON	70	35	9/20/1955	SHALE	40	DOMESTIC	40.595972	-81.019284
3266	255365	WASHINGTON	43	15		SHALE	36	DOMESTIC	40.604122	-81.011788
3267	318406	WASHINGTON	80	35	9/11/1964	SHALE		DOMESTIC	40.601293	-80.996341
3268	339937	WASHINGTON	48	28		SHALE	30	DOMESTIC	40.620801	-80.990198
3269	514548	WASHINGTON	145	61	3/12/1978	SAND		DOMESTIC	40.590033	-81.025552
3270	516385	WASHINGTON	350	100	11/19/1977	SHALE			40.590227	-81.027095
3271	522653	WASHINGTON	190	65	8/3/1977	SAND		DOMESTIC	40.590033	-81.025552

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3272	932485	WASHINGTON	115	30	7/25/2002	SHALE		DOMESTIC	40.594330	-81.023000
3273	932490	WASHINGTON	100	26	4/20/2002	SAND & CLAY	7	DOMESTIC	40.594830	-81.022830
3274	1016772	WASHINGTON	165	60	10/12/2012	SANDSTONE		DOMESTIC	40.594700	-81.019133
3275	917805	WASHINGTON	238	65	11/7/2000	SHALE		DOMESTIC	40.598060	-81.012080
3276	955552	WASHINGTON	127	40	11/25/2002	SHALE	3	DOMESTIC	40.598250	-81.011310
3277	939347	WASHINGTON	300	95	5/22/2002	SANDSTONE		DOMESTIC	40.599670	-81.005630
3278	464185	WASHINGTON	155	95	6/8/1974	ROCK	35	DOMESTIC	40.591910	-81.029858
3279	464245	WASHINGTON	195	105	9/27/1974	SHALE		DOMESTIC	40.589677	-81.030284
3280	909952	WASHINGTON	209	85	4/12/2000	SHALE	2	DOMESTIC	40.592060	-81.030370
3281	987634	WASHINGTON	168	105	11/11/2004		2	DOMESTIC	40.629000	-81.021000
3282	103402	WASHINGTON	100	20	12/8/1952	SHALE	60		40.619187	-81.089749
3283	143551	WASHINGTON	84	20	10/16/1954	SHALE	42	DOMESTIC	40.620339	-81.077474
3284	192454	WASHINGTON	130	16.5	11/18/1957	SHALE	16	MUNICIPAL	40.623319	-81.089712
3285	283277	WASHINGTON	80	33	2/28/1963	SANDSTONE	30	DOMESTIC	40.617998	-81.086985
3286	651630	WASHINGTON	160	40	8/29/1988	SHALE	14		40.625600	-81.087340
3287	799311	WASHINGTON	315	90	4/1/1995	CLEANOUT		DOMESTIC	40.620107	-81.078207
3288	1014659	WASHINGTON	226	147	6/19/2012	LIMESTONE		COMMERCIAL	40.620300	-81.068667