

APPENDIX A
GENERAL SCOPE OF WORK
AND SPECIFICATIONS

The Contractor, the Contractor's agents, representatives and subcontractors shall perform this Plugging Project in accordance with Ohio Revised Code 1509.26, Ohio Administrative Code Chap. 1501:9-11 and 1501:9-12, the Agreement, and in accordance with the following documents that are attached hereto and made a part hereof:

1. Detailed Well Specifications and Plugging Requirements; and
2. Contractor Unit Price Equipment and Material list.

Subject to the Contractor's compliance with this Scope of Work, Contractor is solely responsible for and has control over all plugging and reclamation construction means, methods, manners, techniques, sequences, and procedures, for safety precautions and programs in connection with the Plugging Project, and for coordinating all portions of the Plugging Project. The Contractor shall comply with the following:

The Contractor, the Contractor's agents, representatives and subcontractors shall perform plugging projects during the days of Monday through Friday. Work will not be conducted on weekends or state/national holidays except with Division approval or during emergency situations. A work day is defined as eight (8) hours. However, additional hours may be worked with Division approval or during emergency situations.

PART 1.
EQUIPMENT

The Contractor equipment shall pass all safety requirements of local, state, and federal agencies. The Ohio Department of Natural Resources, Division of Oil and Gas Resources Management ("ODNR") reserves the right to inspect the equipment prior to the Recommendation of Award.

Unless otherwise noted, all equipment and materials required to complete the work described shall be provided by the Contractor.

PART 2.
NOTIFICATIONS

2.1 Seven Working Day Notice

The Contractor, the Contractor's agents, representatives, subcontractors, or independent contractors shall contact the responsible oil and gas resources inspector (the "Inspector") no less than seven (7) working days prior to commencement of work. Notice may be written or oral. This notice will allow the appropriate Division staff time to mark the approved access route and any sensitive areas that need to be left undisturbed.

The Contractor, the Contractor's agents, representatives and sub-contractors shall contact each utility company that has utilities that directly affect plugging activities at the well location(s).

2.2 Public 48 Hour Notice

Prior to initiating well plugging operations, the Contractor shall give a minimum of 48 hours' notice to the landowner, persons residing within 100 feet of the well and the local fire department. Confirmation of this notification shall also be made to the Inspector or the ODNR Regional Office.

2.3 Emergency Notification

When emergency conditions are encountered, such as a release of hydrogen sulfide gas (H₂S), natural gas, crude oil, condensate or brine that threatens human health, safety or the environment, as described in ODNR Rule 1501:9-08-02, the Contractor shall notify the local fire department, the local Emergency Planning Committee (LEPC) and call the 24/7 incident notification number: 1-844-OH-Call1 (1-844-642-2551) within 30 minutes of the occurrence.

PART 3.

ACCESS AND PRESERVATION OF SITE

Costs for the adequate access to the well site for the plugging equipment are to be included in the bid. Unless waived, placement of all tanks and equipment shall be subject to ODNR's approval. If requested by ODNR, access roads will be chained or cabled to prevent unauthorized use.

Special attention shall be given to maintaining trees and other vegetation that have scenic value, provide shade, reduce erosion and runoff, or add to the aesthetics of the area. No trees three (3) inches or larger in diameter shall be removed without the ODNR's permission. Any alterations to the natural topography required to provide ingress and egress to the well site must be approved before work begins.

PART 4.

DAMAGE CAUSED BY CONTRACTOR

All damage caused by the Contractor's negligence in carrying out of this Contract to any public or private property of any nature whatsoever, including trees, shrubs, and crops, shall be corrected to ODNR's satisfaction at the expense of the Contractor. If crops are damaged and the Contractor, landowner, or tenant cannot reach a settlement, the County Cooperative Extension Service shall set a fair price for crop damages and the decision shall be final and binding upon all parties. All subsequent payments due the Contractor shall be withheld until the Contractor provides proof of payment of any such claim.

The Contractor shall be responsible for all costs of repairing or replacing any survey monument that is disturbed or destroyed by the Contractor during the plugging operation that are clearly defined on the maps supplied by the Division. The Contractor shall contract a professional surveyor who is licensed and registered by the State of Ohio to perform the re-establishment of said monuments according to the standards set forth by the governing body or law of said monument. For the purpose of this contract, the term survey monument shall apply to any property boundary marker, federal, state or county geodetic benchmark, state or county right of way monument, FEMA benchmarks or flood elevation markers.

PART 5.
WATER WELL OR PIT

The Contractor will follow the procedures outlined in the “Detailed Well Specifications and Plugging Requirements” for cleaning out and plugging any water well or closing any pit associated with the oil or gas well.

Fresh water shall be placed in all portions of the well not filled with cement. Changes in the type of spacer must be approved by the Inspector.

PART 6.
SAFETY

6.1 Public Safety Coordination Meeting

The Contractor shall hold a safety meeting with the local fire department, ODNR Emergency Operations staff and Inspector, and other applicable contracting staff prior to commencement of plugging activities. The meeting shall review 1) the safety of the public during operations, 2) the safety of workers during operations, 3) emergency notifications of events, 4) site set up and layout, 5) general overview of operations.

6.2 Daily Safety Meetings

The Contractor shall hold a daily safety meeting for all personnel on-site prior to the commencement of work. The Contractor will also provide and maintain a sign in/out sheet for all people on location. The Contractor will immediately report any accidents and/or safety concerns to the Inspector.

6.3 Excavation and Trenching Requirements

The Contractor shall follow the notification protocol as specified in Part 2 of the General Scope of Work before the start of any excavating activities. The Contractor will comply with OSHA Construction Standards for excavation and trenching under 29CFR 1926 Subpart P.

6.4 Hazardous Communications Requirements

The Contractor shall maintain Safety Data Sheets (SDS) for all chemicals stored and/or used on-site. A copy of all SDS will be supplied to the local Fire Department and to the Division.

6.5 Site Security

The Contractor shall provide and install protective barriers/fencing around the work area to prevent unauthorized access. Ingress and Egress access must be maintained at all times.

6.6 Wind Direction Indicator

The Contractor shall install a windsock in an open area of the well location where it is visible to all onsite personnel. It shall be constructed of high visibility material and deployed no less than six (6) feet above grade during the plugging operations.

6.7 Muster and Smoking Areas

The Contractor shall mark and assign a primary and a secondary muster area daily upwind of the well location. These are to be determined based on prevailing wind direction, as indicated by the windsock. The Contractor will post an emergency contact information sheet at each muster site. The Contractor will establish a safe location for a designated smoking area.

6.8 Ignition Sources and Parking Areas

The Contractor shall identify and mark all potential ignition sources within a 50-foot radius of the well. The designated parking area will be outside the 50-foot radius from the well.

6.9 Air Monitoring and Worker Safety

The Contractor shall supply and place a 4-gas monitor at the wellhead. The gas monitor must be calibrated and maintained to monitor Methane (CH₄), Oxygen (O₂), Carbon Monoxide (CO) and Hydrogen Sulfide (H₂S).

Stop work must be followed when any of the levels listed below occur:

- Methane - 1000 parts per million (PPM)/5% Lower Explosive Limit (LEL),
- Oxygen - saturation below 19.5% or above 23%,
- Carbon Monoxide – 50 PPM,
- Hydrogen Sulfide - 10 PPM.

The levels stated above are directly from the Occupational Safety and Health Administration (OSHA) and The National Institute for Occupational Safety and Health (NIOSH) and are standard for air monitoring procedures for safety and work environments. If any of the above levels are alarmed, all personnel will shut down ignition sources and report to the muster area. From the muster area, the Contractor will call 911 for assistance from the local Fire Department.

Division Emergency Operations personnel or the Inspector has the right to stop work if the actions are unsafe or the actions cause or are likely to cause danger to the workers, public, or the environment.

PART 7. **EROSION AND SEDIMENT CONTROL**

Temporary erosion control measures are required during the course of this project. These measures may consist of the installation of straw bale dikes, silt fence, filter socks, inlet protection structures, erosion control blankets, energy dissipation, and temporary seeding & mulching.

Once construction begins, the Contractor shall be solely responsible for all construction related to the control of off-site sedimentation. This sediment shall be removed by the Contractor at the Chief's direction.

A. Temporary Measures.

1. Temporary erosion control structures shown on the Drawing Plan Set, identified with these specifications, or as directed by the Chief shall be placed as soon as construction starts and must be maintained during the course of the project. At the direction of the Chief, the Contractor shall remove the temporary controls when they are no longer needed or when required permanent control measures have been completed.
2. If sediment escapes the site, accumulations must be removed at a frequency to minimize further negative effects, and whenever feasible, prior to the next rain event.

B. Maximum Exposed Areas.

1. Stabilization measures must be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and except as provided below, must be initiated no more than seven (7) days after the construction activity in that portion of the site has temporarily or permanently ceased.
2. Where the initiation of stabilization measures by the 7th day after construction activity temporarily or permanently ceased is precluded by snow cover, or frozen ground conditions, stabilization measures must be initiated as soon as practicable.
3. Where construction activity on a portion of the site is temporarily ceased, and earth-disturbing activities will be resumed within fourteen (14) days, temporary stabilization measures do not have to be initiated on that portion of site.
4. The Chief shall limit the area of excavation, borrow and embankment operations in progress commensurate with the Contractor's capability and progress in keeping the finished grading, re-soiling, mulching, seeding and other such permanent control measures current in accordance with the acceptable schedule.

C. Winterization.

1. When an incomplete project will be left exposed throughout the winter season, the Contractor shall furnish the Chief a plan indicating the control measures to be installed and maintained until the next construction season.
2. If the winter period falls within the anticipated construction period of the Contract and as indicated in the original approved construction schedule, control structures will be paid for by the Chief at the unit prices bid.
3. If the project is not substantially completed prior to the winter season due to the failure of the Contractor to meet the completion date, these necessary control structures will be installed and maintained by the Contractor at his expense and these items will not be paid for under the terms of the Contract, except those that are permanent facilities to be left in place in accordance with the Drawing Plans Set and Specifications.

- D. Other Controls. Off-site vehicle tracking of sediments and the generation of dust must be minimized, and any waste must be properly disposed.
- E. Inspections. The ODNR Inspector shall conduct inspections to ensure that the control practices are functional and to evaluate whether the erosion and sediment control measures are adequate and properly implemented.
- F. Enforcement. The Chief shall take appropriate steps to ensure that sedimentation does not leave the project site. At his/her discretion, the Chief shall require the removal of off-site sediment by the Contractor if such sediment resulted from the Contractor's negligence to place and maintain sediment control structures in accordance with the Drawing Plan Set and Specifications.
- G. Payment. Unless there is a specific pay item in the Detailed Specifications, this work shall be incorporated into other items of work.

PART 8.
SPILL PREVENTION AND REMEDIATION

The Contractor is expected to prevent and, if necessary, contain and remediate any spills that may occur at the site due to plugging activities. All stationary plugging equipment on well locations that are in tiled farm fields, residential neighborhoods, parks, or in/adjacent to areas determined by the Division to be environmentally sensitive, will be staged on an impermeable liner and berm. The Contractor will have oil absorbent pads and booms available onsite during the plugging operations.

PART 9.
HYDROGEN SULFIDE

If the well that is being plugged is known to produce hydrogen sulfide (H₂S), the following considerations must be observed:

SAFETY

- A. The Contractor must provide the appropriate equipment, on-site, to properly detect and abate any H₂S emitted from the well. If the Contractor does not have the appropriate equipment to properly detect and abate any H₂S emitted from the well, they will contract with the appropriate party to provide these services.
- B. The Contractor will shut-in the well each night after the plugging operations have ceased, unless otherwise instructed by the Division. The Contractor will continue this process until the plugging operations are complete and there are no further signs of a gas release.

CEMENT

- A. The Contractor will use Class A cement to plug wells known to produce hydrogen sulfide.

PART 10.
CASING

ODNR reserves the right to require the removal and or placement of any tubing, casing, or liners deemed necessary to properly plug and abandon the well. If a string of casing that would normally be pulled cannot be removed, the Contractor shall log the well and perforate the casing, in accordance with ODNR's instructions, so that cement can be circulated behind the casing.

The Contractor shall run an operational string of casing when caving of the well prevents clean out to contract depth. If the contract depth cannot be reached, an adjustment may be made for materials and labor not required.

PART 11.
WELL HEAD CONTROL

The Contractor is responsible for installing, according to best management practices, a wellhead control device/flow diverter on the well casing. All fluids, gasses and solids generated by the plugging process will be diverted into a steel tank. This tank will be set a minimum of 20 feet from the well. The Contractor shall also maintain an adequate supply of brine and/or mud at the well for possible well control emergencies. These amounts are well specific and will be defined in the Detailed Scope of Work. Fresh water may be used as a well control fluid in certain applications and with Division approval. The Contractor will install a 2-inch diameter (minimum) kill line on the well. The injection point for the kill line will be a minimum of 30 feet from the well.

PART 12.
WELL OBSTRUCTION ASSESSMENT

If an obstruction is encountered in the well bore that prevents the Contractor from reaching total depth, the Contractor will attempt to identify/assess the nature of the obstruction and attempt to remove any obstruction deemed an impediment to the plugging operation. Tools used in the assessment of the obstruction may include the use of impression blocks, downhole videography, or other available methods. The Contractor will list the cost for supplying and running downhole videography on the appropriate line item in the contingency section of the Bid Sheet. The Contractor will also list their hourly rate for rig stand-by time on the appropriate line item in the contingency section of the Bid Sheet. The Contractor will supply impression blocks as part of their normal rig equipment.

PART 13.
MILLING/DRILLING/FISHING

The removal of an unknown obstruction that is encountered during the cleanout of a well may include the use of drilling, milling and/or fishing tooling and equipment. The Contractor will include the costs for these services on the appropriate line items in the contingency section of this bid unless these costs are part of a planned procedure. Drilling and milling charges will be based on a Day Rate charge, which will include rig time, swivel, mud pump and all labor. Fishing charges will also be based on a Day Rate charge, which will include rig time and all labor. The Contractor will be paid for the actual time and services rendered. The Division will not be responsible for drilling/milling or fishing charges that are due to Contractor negligence or Contractor equipment failure. The Contractor will list the cost for tubing, collars, mills, bits and

fishing tools on the appropriate line items in the contingency section of the Bid Sheet and the Contractor will be paid for the actual materials utilized.

PART 14.
CIRCULATION OF WELLBORE

Freshwater or approved drilling muds are to be used during clean out or circulation of the wellbore. Brine may only be used with ODNR's approval on a well-by-well basis. Lost Circulation Material (LCM), such as cotton seed hulls, may be used to aid in obtaining circulation, unless otherwise specified by the Division. Circulation must be established prior to conducting cementing procedures.

PART 15.
CEMENT

The Contractor must notify the Inspector a minimum of 24 hours in advance of the time that cementing will commence.

Cement used for plugging must be API Class A or with prior approval, State Transportation approved ASTM Type I (ASTM C150). All cement, except nine-sack grout ready-mix, must be mixed on location. Air-entraining cements shall not be used for plugging. Cement shall not contain bentonite, fly ash, or other extenders which retard set time or decrease compressive strength without prior approval by the Division. Cement slurry shall be mixed at the API recommended weight, between 15 and 16 pounds per gallon, unless otherwise specified in the Detailed Well Specifications and Plugging Requirements. The Contractor shall be responsible for providing a mud scale for weighing the cement slurry. Water used for cementing shall be free of any impurities that would adversely affect set time and compressive strength. Cement slurry used for plugging must develop a minimum compressive strength of 1,000 PSI after 24 hours at well bore temperature.

PART 16.
PLUGGED WELL IDENTIFICATION

A steel plate, a minimum of ¼-inch thick, shall be tack welded on top of all plugged wells. The well's permit number and "ODNR" shall be welded on the plate in numbers/letters as large as practical. Letters shall have a minimum relief of 1/8-inch.

PART 17.
RESTORATION

17.1 Disturbed Areas and Materials

All trees, brush, stones, or other natural materials disturbed during the plugging operation shall be removed from the site or, with the approval of ODNR and the owner of the surface estate of the property on which the well is located, shall be buried to a depth of at least twenty-four (24) inches. All highly compacted areas within the work zone shall be scarified to at least twelve (12) inches.

Final grades will conform to the natural contours of the land and will not pond water within the disturbed areas. Disturbed areas shall be vegetated as soon as possible after plugging. No permanent seeding will be done between November 1 and March 15.

During the site restoration process, the Contractor will use appropriate backfill material and compaction methods to avoid any settlement in backfilled areas. If the Contractor does not follow this process and settlement occurs, the Contractor will be responsible for any additional restoration costs.

17.2 Backfill

Areas to be seeded, which have been excavated, shall be backfilled to within six (6) inches of the original ground elevation. After settlement, the top six (6) inches of backfill shall be made with the original topsoil which has been stockpiled. If there is a deficiency of suitable topsoil, the Contractor shall furnish suitable topsoil as required.

17.3 Re-seeding and Fertilizer

If an area is seeded, the Contractor shall work the soil to a depth of three (3) inches, or deeper, and remove rocks and other foreign material three (3) inches or greater in any dimension. The appropriate type and mixture of grass seed and fertilizer will be applied to promote vegetative cover and proper growth. The seeded areas will be appropriately covered with clean, un-weathered straw and soaked to a depth of three (3) inches.

17.4 Maintenance of Seeded Areas

Seeded areas shall be maintained until final inspection which will be performed by the Inspector within thirty (30) days of written notification of completion of seeding by the Contractor. Areas damaged by wind, water, or other causes shall be repaired to the re-established condition and grade prior to seeding and shall then be re-fertilized, reseeded and re-mulched as directed by ODNR. Such repair of these areas shall be made at the direction of ODNR even when the damage or erosion is not due to fault or negligence of the Contractor.

17.5 Curbing, Sidewalks and Driveways

The condition of any curbing, sidewalks and driveways, which may be impacted by the plugging operations, will be photo-documented by the Division prior to the commencement and after the completion of plugging operations. All photos/videos will be time/date stamped. Bids will include estimated costs to bring these areas to a state that is equal to or better than original, if damaged.

PART 18. **REMOVAL OF MATERIALS**

All salvaged well materials shall be removed from the site when plugging has been completed. and disposed as specified in the “Detailed Well Specifications and Plugging Requirements”. ODNR shall be reimbursed for the salvage value of all surface equipment, well casing, and production equipment removed from each site, minus the contractor costs for transportation and disposal.

All fluids, cuttings, and impacted soils generated during the plugging process shall be removed within 72 hours after plugging activities are completed. The Contractor will be responsible for the proper transportation to and disposal of all residual fluid at an approved Class II disposal well. All cuttings generated by the plugging operations will also be properly transported to and

disposal of at an EPA approved landfill. The Contractor will provide the Division with documentation of disposal within three (3) days of acceptance at the disposal facility.

PART 19.
TOILET FACILITIES

Where there are no readily accessible public toilet facilities, the Contractor will provide a portable field toilet on the location during plugging operations.

DETAILED WELL SPECIFICATIONS AND PLUGGING REQUIREMENTS

Kinzelman #1
34-103-2-4278-0000
Medina County, Chatham Township
GPS: 41.1135821°, -82.0442450°

Background:

The Kinzelman #1 is located approximately one mile west of the intersection of State Route 83 and Spencer Lake Road, on the north side of Spencer Lake Road, in Chatham Township, Medina County, Ohio. This well is situated on a 25.63 acre parcel (#00409A28003) at 9839 Spencer Lake Rd. (CR 45), owned by Dennis and Kathleen Kinzelman. The well is in an open lot behind the barn, and is one of five wells located on this property. Drainage in the area flows to the east 105 feet into a private pond and to the north 450 feet into an un-named stream that flows to the southwest into the East Branch Black River.

An inspection conducted by the Division in 2014 found an exposed 5.5-inch diameter casing and casing head with 2-inch diameter tubing inside the 5.5-inch diameter casing. The casing head was leaking a small amount of sweet gas. There was no larger diameter casing visible on this inspection. There is a wooden post nearby with an electrical box attached. However, there is no power supply to the electric box. A follow-up inspection, conducted in 2016, found one of the ports in the side of the casing head open. There was no detectable natural gas reading obtained from the opening. There is a 100 barrel steel oil storage tank and a concrete brine storage vault (size is unknown) located approximately 375 feet north of the Kinzelman #1 and 55 feet northwest of the Kinzelman #3. This tank and vault appear to have serviced all five wells on the Kinzelman property. However, for the purposes of this scope of work, this equipment will be associated with the Kinzelman #1.

Available drilling records show that in November of 1985, Jesse Oil drilled the Kinzelman #1 to a total depth of 358 feet, in the Berea Formation. The casing records for this well show that 5.5-inch diameter casing was set at 354 feet and cemented with 60 sacks of cement, with cement circulated to surface. Verbal reports indicate that a submersible electric pump may be installed on the 2-inch diameter tubing. Jesse Oil never submitted a completion report to the Division, and has since forfeited their bond and is no longer in business. The landowner, Mr. Kinzelman, indicated that this was a shot hole and only produced salt water. He also stated that all of the wells on his property had been equipped with submersible pumps.

Available records and maps show that hundreds of Berea wells have been drilled in Chatham Township since the late 1800s. A review of offset well data found drilling and casing data for several Berea wells offset to the Kinzelman #1. The records for these wells show the following:

- Permit # 4277: Kinzelman #2 is located 200 feet to the northwest. Drilling was completed in November 1985 to a total depth (TD) of 358 feet. This well produced from the Berea Sandstone, however, the thickness of the Berea was not recorded. Records indicate that this well is cased with 5.5 inch diameter casing to 354 feet. Division inspections of this well confirm the presence of 5.5 inch diameter casing and 2 inch diameter tubing to an unknown depth. The landowner indicated that this was a shot hole.
- Permit # 4961: Located 500 feet to the south. Drilling was completed on 07-15-1919, to a total depth (TD) of 392. This well produced from the Berea Sandstone. The thickness of the Berea is recorded at 25 feet (362 feet-387 feet). This well was cased with 8.25-inch diameter casing to 42 feet and 6.625-inch diameter casing to 129 feet. This was a shot hole. This well was plugged by the Division on 02-07-2003, under the Orphan Well Program.
- Permit # 4962: Located 775 feet to the southwest. Drilling was completed on 10-25-1919, to a total depth (TD) of 384 feet. This well produced from the Berea Sandstone. The thickness of the Berea is recorded at 33 feet (351 feet-384 feet). This well was cased with 34 feet of 8.25-inch diameter casing and 153 feet of 6.625-inch diameter casing. This hole was shot with 100 quarts of nitroglycerin from 355 feet – 380 feet.

The well was then equipped with 375 feet of 2-inch diameter tubing. This well was plugged on 01-28-2003 using the bail and grout method.

- Permit # 1236: Located 435 feet to the west. Drilling was completed on 11-30-1959, to a total depth (TD) of 430 feet. This well produced from the Berea Sandstone. The thickness of the Berea is recorded at 81 feet (345 feet-426 feet). This well was cased with 6.625-inch diameter casing to 22 feet and 5.5-inch diameter casing to 161 feet. This was a shot hole. There are no plugging records for this well.

Our database shows that the nearest water wells to the Kinzelman #1 are:

- Kinzelman Private Water Well: located approximately 210 feet to the southeast of the Kinzelman #1. This water well is located at GPS: 41.11308°, -82.04393° and is at the rear of the Kinzelman home, approximately six (6) feet from the north foundation wall and near the back entry ramp. Records for this well show a total depth of 115 feet in shale. Fresh water was encountered at 44 feet and the well was cased to 42 feet. This residential water well is used and tested regularly by the property owner.
- Permit #437929: located at GPS: 41.113273°, -82.047481°, is approximately 905 feet southwest of the Kinzelman #1. This water well is located on the Daniel Zisko property and was drilled to a depth of 45 feet in shale, with water at 30 feet and was cased to 27 feet. The water use or quality of this well is not known.

Survey:

A map/plat of the Kinzelman property is included in Exhibit A and shows the property boundaries, the location of the well on the property, the access path to the well, the construction limits for both the access road and well location, and the location of all known utilities on the property.

Engineering Assessment:

An Engineering Assessment was completed by the Division at this site and is included in Exhibit B. This assessment specifies the engineering required to be completed/addressed by the Contractor regarding access to the property, access to the well, well site construction and site restoration.

Radiological Assessment:

A Radiological Assessment was completed by the Division at this site and is included in Exhibit C. This assessment specifies the radiological considerations required to be completed/addressed by the Contractor at this site.

Hydrogeological Assessment:

A Hydrogeological assessment was completed by the Division at this site and is included in Exhibit D. This assessment specifies the hydrogeological considerations required to be completed/addressed by the Contractor at this site.

Environmental Assessment:

An Environmental Assessment was completed by the Division at this site and is included in Exhibit E. This assessment specifies the environmental considerations required to be completed/addressed by the Contractor at this site.

Safety:

A Safety Assessment was completed by the Division at this site and is included in Exhibit F. This assessment specifies the safety considerations required to be completed/addressed by the Contractor at this site.

Site Preparation:

- 1) Access to the property, access to the well and the construction limits for these areas are defined on the map included in Exhibit A. The Contractor will be responsible for staying within the access and construction boundaries shown on this map. If plugging operations are conducted during inclement weather and/or soil conditions dictate, the Contractor will use wood and/or composite mats or steel plates to access the well in order to minimize the damage to the property. See Exhibit B for mat/plate specifications and requirements.
- 2) The Contractor may use gravel as a roadbed material at the access point to the property only. Any gravel installed at this point will be removed by the Contractor upon completion of plugging activities unless the Division obtains a waiver, signed by the landowner. The Contractor **will not** apply stone to any other portion of the farm lane in order to access the well location. The Division will photo-document the condition of the proposed access route prior to moving equipment onto location and after plugging and restoration operations are completed.
- 3) The Contractor will remove 30 feet of the wire fencing, south of the existing farm gate to access this well and also the Kinzelman #2 (see Exhibit A). The contractor will provide a temporary gate during plugging operations and will replace this section of fencing, using comparable materials, upon completion of plugging and restoration activities.
- 4) The Contractor shall follow the provisions stated in Part 7 of the General Scope of Work and/or Exhibit B relating to erosion and sediment control. Topsoil will be stockpiled onsite and re-used during site restoration.
- 5) The Contractor shall follow the provisions stated in Part 8 of the General Scope of Work and/or Exhibits D and E for spill prevention and remediation. This well is located just west of a private pond.
- 6) The Contractor will supply and use open top steel tanks to collect and store the fluid generated by the cleanout and plugging process. These tanks are to be set a minimum of 20 feet from the well. No earthen pits are to be constructed. The Contractor will be responsible for the proper transportation to and disposal of all generated fluid at a Class II disposal well. The Contractor will provide the Division with documentation of disposal within three (3) days of acceptance at the disposal facility. The Contractor will list the fluid disposal facility they intend to use where indicated on the Bid Sheet.
- 7) The Contractor will excavate all visibly impacted soil at the well site before the commencement of plugging activities. All excavated impacted soil and other solids generated by the well cleanout process that is temporarily stored on site will be kept in a lined and covered roll-off box/half tank. The Contractor will solidify any residual fluid associated with these soils/solids with Portland cement. The Contractor will be responsible for the proper transportation of this material to and disposal at an Ohio Environmental Protection Agency (OEPA) approved solid waste facility. The Contractor will provide the Division with documentation of disposal within three (3) days of acceptance at the disposal facility. The Contractor will list the soil disposal facility they intend to use where indicated on the Bid Sheet.
- 8) The Contractor will be responsible for decommissioning the steel oil storage tank and the concrete brine storage vault. The interior of both the tank and vault will be steam cleaned and the residual fluids will be handled as specified in paragraph six (6) of this section. Any material generated from the cleaning of the tank and vault that is too thick to pump will be solidified with Portland cement and disposed of as specified in paragraph seven (7) of this section. After cleaning, the tank will be destroyed and scrapped at a recycling facility and the concrete vault will be destroyed and disposed of as specified in paragraph six (6) of this section.

Well Preparation:

- 1) The Contractor will excavate around and visually examine the existing 5.5-inch diameter casing to evaluate its condition immediately below grade. If this portion of the casing is found to be severely degraded, the Contractor will remove the incompetent section of casing and install enough new casing, of similar

diameter, to bring the top of the existing casing to ground level or a suitable working height. Gravel and/or mats may be used in the well area as a base to stabilize the rig. If gravel is used, it will be removed upon completion of plugging activities.

- 2) The Contractor will install an appropriate wellhead and an approved method of well control as specified in Part 11 of the General Scope of Work to insure there is control of gas and/or fluids generated from the well. The Contractor will maintain a minimum of 75 barrels of fresh water on location for well control.

Plugging Procedure:

For the purposes of this scope of work, it is assumed that the 2-inch diameter tubing is not on a packer and that the well is still equipped with a submersible pump.

- 1) The Contractor will remove the 2-inch diameter tubing and submersible pump and clean out the well to its estimated total depth (TD) of 384 feet or a depth approved by the Division. The Contractor will provide accurate measurements of the amount of tubing retrieved from the wellbore. The Contractor will stage the tubing removed from the well on pipe racks on the well site until arrangements are made for disposal at an OEPA approved solid waste landfill facility. The Contractor will provide the Division with documentation of disposal within three (3) days of acceptance at the disposal facility. The Contractor will line and berm the area under the pipe racks to contain any residual fluids and scale.
- 2) If an obstruction is encountered in the well bore that prevents the Contractor from reaching total depth, the Contractor will follow the process described in Part 12 of the General Scope of Work to assess the obstruction and Part 13 for the removal of the obstruction. The Contractor will include the costs for these services on the appropriate line items on the Bid Sheet and will be paid for services rendered.
- 3) Once total depth is reached and the well is static, the Contractor will bale the hole dry. The provisions stated in Part 15 of the General Scope of Work referencing Cement will not apply to the plugging of this well. Once the hole is and remains dry, the Contractor will fill the well bore from total depth to within 30 inches of the surface with a Nine Sack Grout mix. The Contractor will mix this grout at a consistency that will allow the grout to flow to the bottom of the well without bridging off in the well bore. If the well cannot be bailed dry the contractor will use a siphon string, which is plumbed to the open top steel tank, when applying the grout in order to evacuate the fluid in the hole. This plug will be allowed to cure for a minimum of eight (8) hours, after which the Contractor will check the grout level and top off with additional grout, if necessary.

Plugged Well Identification:

The Contractor will follow the process stated in Part 16 in the General Scope of Work to identify the well after plugging is completed.

Restoration:

Within three (3) working days after the plugging operation is completed, weather permitting; the Contractor will remove all plugging-related equipment from the site. During this timeframe, all fluids and cuttings must also be removed and disposed of as specified in paragraphs six (6) and seven (7) in the "Site and Well Preparation" section above.

Tubulars will be stored onsite, as specified in Item 1 of the "Plugging Procedure" of this Detailed Well Specifications and Plugging Requirements, until arrangements are made for disposal at an OEPA approved solid waste facility. **The restoration timeframes listed below will be adjusted based on disposal plans.**

Within fifteen (15) working days after the completion of plugging operations, weather permitting, the Contractor will finish grade to as close to its original contour as possible all areas disturbed by the plugging activities. Where applicable, the Contractor will prepare the affected areas, seed, mulch, fertilize and maintain these areas

to promote vegetative growth as specified in Part 17 of the General Scope of Work. The access road will be restored to a condition equal to or better than before plugging operations started.

DETAILED WELL SPECIFICATIONS AND PLUGGING REQUIREMENTS

Kinzelman #2
34-103-2-4277-0000
Medina County, Chatham Township
GPS: 41.1140047°, -82.0437605°

Background:

The Kinzelman #2 is located approximately one mile west of the intersection of State Route 83 and Spencer Lake Road, on the north side of Spencer Lake Road, in Chatham Township, Medina County, Ohio. This well is situated on a 25.63 acre parcel (#00409A28003) at 9839 Spencer Lake Rd. (CR 45) and is owned by Dennis and Kathleen Kinzelman. The well is in an open lot behind the barn, and is one of five wells located on this property. Drainage in the area flows to the south 85 feet into a private pond and to the north 325 feet into an un-named stream that flows to the southwest into the East Branch Black River.

An inspection conducted by the Division in 2014 found an exposed 5.5-inch diameter casing and casing head with 2-inch diameter tubing inside the 5.5-inch diameter casing. There was no larger diameter casing visible on this inspection. There is a wooden post nearby with an electrical box attached. However, there is no active power supply to the electric box. A follow-up inspection was conducted in 2016, which found one of the ports in the side of the casing head open. There was no detectable natural gas reading obtained from the opening.

Available drilling records show that in November of 1985, Jesse Oil drilled the Kinzelman #2 to a total depth of +/- 358 feet, in the Berea Formation. The casing records for this well show that 5.5-inch diameter casing was set at 354 feet and cemented with 60 sacks of cement, with cement circulated to surface. Verbal reports indicate that a submersible electric pump may have been installed on the 2-inch diameter tubing. Jesse Oil never submitted a completion report to the Division, and has since forfeited their bond and is no longer in business. The landowner, Mr. Kinzelman, indicated that this was a shot hole. He also stated that all of the wells on his property had been equipped with submersible pumps.

Available records and maps show that hundreds of Berea wells have been drilled in Chatham Township since the late 1800s. A review of offset well data found drilling and casing data for several Berea wells offset to the Kinzelman #2. The records for these wells show the following:

- Permit # 4278: Kinzelman #1 is located 200 feet to the southwest. Drilling was completed in November 1985 to a total depth (TD) of 358 feet. This well produced from the Berea Sandstone, however, the thickness of the Berea was not recorded. Records indicate that this well is cased with 5.5-inch diameter casing to 354 feet. Division inspections of this well confirm the presence of 5.5-inch diameter casing and 2-inch diameter tubing to an unknown depth. The landowner indicated that this was a shot hole.
- Permit # 4276: Kinzelman #3 is located 200 feet to the northwest. Drilling was completed in November 1985 to a total depth (TD) of 347 feet. This well produced from the Berea Sandstone, however, the thickness of the Berea was not recorded. Records indicate that this well is cased with 5.5-inch diameter casing to 345 feet. Division inspections of this well confirm the presence of 5.5-inch diameter casing. The landowner indicated that this was a shot hole.
- Permit # 4961: This well is located 500 feet to the south. Drilling was completed on 07-15-1919, to a total depth (TD) of 392. This well produced from the Berea Sandstone. The thickness of the Berea is recorded at 25 feet (362 feet-387 feet). This well was cased with 8.25-inch diameter casing to 42 feet and 6.625-inch diameter casing to 129 feet. This was a shot hole. This well was plugged by the Division on 02-07-2003, under the Orphan Well Program.
- Permit # 4962: Located 775 feet to the southwest. Drilling was completed on 10-25-1919, to a total depth (TD) of 384 feet. This well produced from the Berea Sandstone. The thickness of the Berea is recorded at 33

feet (351 feet-384 feet). This well was cased with 34 feet of 8.25-inch diameter casing and 153 feet of 6.625-inch diameter casing. This hole was shot with 100 quarts of nitroglycerin from 355 feet – 380 feet. The well was then equipped with 375 feet of 2-inch diameter tubing. This well was plugged on 01-28-2003 using the bail and grout method.

- Permit # 1236: This well is located 435 feet to the west. Drilling was completed on 11-30-1959, to a total depth (TD) of 430 feet. This well produced from the Berea Sandstone. The thickness of the Berea is recorded at 81 feet (345 feet-426 feet). This well was cased with 6.625-inch diameter casing to 22 feet and 5.5-inch diameter casing to 161 feet. This was a shot hole. There are no plugging records for this well.

Our database shows that the nearest water wells to the Kinzelman #2 are:

- Kinzelman Private Water Well: is located approximately 325 feet to the south of the Kinzelman #2. This water well is located at GPS: 41.11308°, -82.04393° and is at the rear of the Kinzelman home, approximately six feet from the north foundation wall and near the back entry ramp. Records for this well show a total depth of 115 feet in shale. Fresh water was encountered at 44 feet and the well was cased to 42 feet. This residential water well is used and tested regularly by the property owner.
- Permit #437929: is located at GPS: 41.113273°, -82.047481° and is approximately 1070 feet southwest of the Kinzelman #2. This water well is located on the Daniel Zisko property and was drilled to a depth of 45 feet in shale, with water at 30 feet and was cased to 27 feet. The water use or quality of this well is not known.

Survey:

A map/plat of the Kinzelman property is included in Exhibit A and shows the property boundaries, the location of the well on the property, the access path to the well, the construction limits for both the access road and well location, and the location of all known utilities on the property.

Engineering Assessment:

An Engineering Assessment was completed by the Division at this site and is included in Exhibit B. This assessment specifies all engineering required to be completed/addressed by the Contractor regarding access to the property, access to the well, well site construction and site restoration.

Radiological Assessment:

A Radiological Assessment was completed by the Division at this site and is included in Exhibit C. This assessment specifies the radiological considerations required to be completed/addressed by the Contractor at this site.

Hydrogeological Assessment:

A Hydrogeological assessment was completed by the Division at this site and is included in Exhibit D. This assessment specifies the hydrogeological considerations required to be completed/addressed by the Contractor at this site.

Environmental Assessment:

An Environmental Assessment was completed by the Division at this site and is included in Exhibit E. This assessment specifies the environmental considerations required to be completed/addressed by the Contractor at this site.

Safety:

A Safety Assessment was completed by the Division at this site and is included in Exhibit F. This assessment specifies the safety considerations required to be completed/addressed by the Contractor at this site.

Site Preparation:

- 1) Access to the property, access to the well and the construction limits for these areas are defined on the map included in Exhibit A. The Contractor will be responsible for staying within the access and construction boundaries defined on this map. If plugging operations are conducted during inclement weather and/or soil conditions dictate, the Contractor will use wooden/synthetic mats or steel plates to access the well in order to minimize the damage to the property. See Exhibit B for mat/plate specifications and requirements.
- 2) The Contractor may use gravel as a roadbed material at the access point to the property only. Any gravel installed at this point will be removed by the Contractor upon completion of plugging activities unless the Division obtains a waiver, signed by the landowner. The Contractor **will not** apply stone to any other portion of the farm lane in order to access the well location. The Division will photo-document the condition of the proposed access route prior to moving equipment onto location and after plugging and restoration operations are completed.
- 3) The Contractor use the use the access created for the plugging of the Kinzelman #1 for equipment access to plug the Kinzelman #2 (see Exhibit A). The contractor will continue to provide a temporary gate during plugging operations and will replace this section of fencing, using comparable materials, upon completion of plugging and restoration activities.
- 4) The Contractor shall follow the provisions stated in Part 7 of the General Scope of Work and/or Exhibit B relating to erosion and sediment control. Topsoil will be stockpiled onsite and re-used during site restoration.
- 5) The Contractor shall follow the provisions stated in Part 8 of the General Scope of Work and/or Exhibits D and E for spill prevention and remediation. This well is located just north of a private pond.
- 6) The Contractor will supply and use open top steel tanks to collect and store the fluid generated by the cleanout and plugging process. These tanks are to be set a minimum of 20 feet from the well. No earthen pits are to be constructed. The Contractor will be responsible for the proper transportation to and disposal of all generated fluid at a Class II disposal well. The Contractor will provide the Division with documentation of disposal within three (3) days of acceptance at the disposal facility. The Contractor will list the fluid disposal facility they intend to use where indicated on the Bid Sheet.
- 7) The Contractor will excavate all visibly impacted soil at the well site before the commencement of plugging activities. All excavated impacted soil and other solids generated by the well cleanout process that is temporarily stored on site will be kept in a lined and covered roll-off box/half tank. The Contractor will solidify any residual fluid associated with these soils/solids with Portland cement. The Contractor will be responsible for the proper transportation of this material to and disposal at an approved Ohio Environmental Protection Agency (OEPA) approved solid waste facility. The Contractor will provide the Division with documentation of disposal within three (3) days of acceptance at the disposal facility. The Contractor will list the soil disposal facility they intend to use where indicated on the Bid Sheet.

Well Preparation:

- 1) The Contractor will excavate around and visually examine the existing 5.5-inch diameter casing to evaluate its condition immediately below grade. If this portion of the casing is found to be severely degraded, the Contractor will remove the incompetent section of casing and install enough new casing, of similar diameter, to bring the top of the existing casing to ground level or a suitable working height. Gravel and/or mats may be used in the well area as a base to stabilize the rig. If gravel is used, it will be removed upon completion of plugging activities.
- 2) The Contractor will install an appropriate wellhead and an approved method of well control as specified in Part 11 of the General Scope of Work to insure there is control of gas and/or fluids generated from the well.

The Contractor will maintain a minimum of seventy-five (75) barrels of fresh water on location for well control.

Plugging Procedure:

For the purposes of this scope of work, it is assumed that the 2-inch diameter tubing is not on a packer and that the well is still equipped with a submersible pump.

- 1) The Contractor will remove the 2-inch diameter tubing and submersible pump and clean out the well to its estimated total depth (TD) of 358 feet or a depth approved by the Division. The Contractor will provide accurate measurements of the amount of tubing retrieved from the wellbore. The Contractor will stage the tubing removed from the well on pipe racks on the well site until arrangements are made for disposal at an OEPA approved solid waste landfill facility. The Contractor will provide the Division with documentation of disposal within three (3) days of acceptance at the disposal facility. The Contractor will line and berm the area under the pipe racks to contain any residual fluids and scale.
- 2) If an obstruction is encountered in the well bore that prevents the Contractor from reaching total depth, the Contractor will follow the process described in Part 12 of the General Scope of Work to assess the obstruction and Part 13 for the removal of the obstruction. The Contractor will include the costs for these services on the appropriate line items on the Bid Sheet and will be paid for services rendered.
- 3) Once total depth is reached and the well is static, the Contractor will bale the hole dry. The provisions stated in Part 15 of the General Scope of Work referencing Cement will not apply to the plugging of this well. Once the hole is and remains dry, the Contractor will fill the well bore from total depth to within 30 inches of the surface with a Nine Sack Grout mix. The Contractor will mix this grout at a consistency that will allow the grout to flow to the bottom of the well without bridging off in the well bore. If the well cannot be bailed dry the contractor will use a siphon string, that is plumbed to the open top steel tank, when applying the grout in order to evacuate the fluid in the hole. This plug will be allowed to cure for a minimum of eight (8) hours, after which the Contractor will check the grout level and top off with additional grout, if necessary.

Plugged Well Identification:

The Contractor will follow the process stated in Part 16 in the General Scope of Work to identify the well after plugging is completed.

Restoration:

Within three (3) working days after the plugging operation is completed, weather permitting, the Contractor will remove all plugging-related equipment from the site. During this timeframe, all fluids and cuttings must also be removed and disposed of as specified in paragraphs six (6) and seven (7) in the “Site and Well Preparation” section above.

Tubulars will be stored onsite, as specified in Item 1 of the “Plugging Procedure” of this Detailed Well Specifications and Plugging Requirements, until arrangements are made for disposal at an OEPA approved solid waste facility. **The restoration timeframes listed below will be adjusted based on disposal plans.**

Within fifteen (15) working days after the completion of plugging operations, weather permitting, the Contractor will finish grade to as close to its original contour as possible all areas disturbed by the plugging activities. Where applicable, the Contractor will prepare the affected areas, seed, mulch, fertilize and maintain these areas to promote vegetative growth as specified in Part 17 of the General Scope of Work. The access road will be restored to a condition equal to or better than before plugging operations started.

DETAILED WELL SPECIFICATIONS AND PLUGGING REQUIREMENTS

Kinzelman #3
34-103-2-4276-0000
Medina County, Chatham Township
GPS: 41.1144614°, -82.0441975°

Background:

The Kinzelman #3 is located approximately one mile west of the intersection of State Route 83 and Spencer Lake Road, on the north side of Spencer Lake Road, in Chatham Township, Medina County, Ohio. This well is situated on a 25.63 acre parcel (#00409A28003) at 9839 Spencer Lake Rd. (CR 45), owned by Dennis Kinzelman. The well is in an open lot behind the barn and is one of five wells located on this property. Drainage in the area flows 150 feet to the north into an un-named stream that flows to the southwest into the East Branch Black River.

An inspection conducted by the Division in 2014 found 6-inch of exposed 5.5-inch diameter casing. A steel plate, with a 1-inch diameter threaded collar in the center, is welded onto the top of this casing. The 1-inch diameter collar is open to the atmosphere. There was no larger diameter casing visible on this inspection. There was no detectable natural gas reading obtained from the opening. There is a wooden post adjacent to the well with an electrical box attached. However, there is no power supply to the electric box.

Available drilling records show that in November of 1985, Jesse Oil drilled the Kinzelman #3 to a total depth of 347 feet, in the Berea Formation. The casing records for this well show that 5.5-inch diameter casing was set at 345 feet and cemented with 60 sacks of cement, with cement circulated to surface. Jesse Oil never submitted a completion report to the Division, and has since forfeited their bond and is no longer in business. The landowner, Mr. Kinzelman, indicated that this was a shot hole. He also stated that all of the wells on the property had been equipped with submersible pumps.

Available records and maps show that hundreds of Berea wells have been drilled in Chatham Township since the late 1800s. A review of offset well data found drilling and casing data for several Berea wells offset to the Kinzelman #3. The records for these three wells show the following information:

- Permit # 4278: Kinzelman #1 is located 325 feet to the south. Drilling was completed in November 1985 to a total depth (TD) of 358 feet. This well produced from the Berea Sandstone, however, the thickness of the Berea was not recorded. Records indicate that this well is cased with 5.5-inch diameter casing to 354 feet. Division inspections of this well confirm the presence of 5.5-inch diameter casing and 2-inch diameter tubing to an unknown depth. The landowner indicated that this was a shot hole.
- Permit # 4277: Kinzelman #2 is located 200 feet to the southeast. Drilling was completed in November 1985 to a total depth (TD) of 358 feet. This well produced from the Berea Sandstone, however, the thickness of the Berea was not recorded. Records indicate that this well is cased with 5.5-inch diameter casing to 354 feet. Division inspections of this well confirm the presence of 5.5-inch diameter casing and 2-inch diameter tubing to an unknown depth. The landowner indicated that this was a shot hole.
- Permit # 4961: Located 500 feet to the south. Drilling was completed on 07-15-1919, to a total depth (TD) of 392. This well produced from the Berea Sandstone. The thickness of the Berea is recorded at 25 feet (362 feet-387 feet). This well was cased with 8.25-inch diameter casing to 42 feet and 6.625-inch diameter casing to 129 feet. This was a shot hole. This well was plugged by the Division on 02-07-2003, under the Orphan Well Program.
- Permit # 4962: Located 775 feet to the southwest. Drilling was completed on 10-25-1919, to a total depth (TD) of 384 feet. This well produced from the Berea Sandstone. The thickness of the Berea is recorded at 33 feet (351 feet-384 feet). This well was cased with 34 feet of 8.25-inch diameter casing and 153 feet of 6.625-inch diameter casing. This hole was shot with 100 quarts of nitroglycerin from 355 feet – 380 feet.

The well was then equipped with 375 feet of 2-inch diameter tubing. This well was plugged on 01-28-2003 using the bail and grout method.

- Permit # 1236: Located 435 feet to the west. Drilling was completed on 11-30-1959, to a total depth (TD) of 430 feet. This well produced from the Berea Sandstone. The thickness of the Berea is recorded at 81 feet (345 feet-426 feet). This well was cased with 6.625-inch diameter casing to 22 feet and 5.5-inch diameter casing to 161 feet. This was a shot hole. There are no plugging records for this well.

Our database shows that the nearest water wells to the Kinzelman #3 are:

- Kinzelman Private Water Well: located approximately 480 feet to the southeast of the Kinzelman #3. This water well is located at GPS: 41.11308°, -82.04393° and is at the rear of the Kinzelman home, approximately six (6) feet from the north foundation wall and near the back entry ramp. Records for this well show a total depth of 115 feet in shale, fresh water was encountered at 44 feet and the well was cased to 42 feet. This residential water well is used and tested regularly.
- Permit #437929: located at GPS: 41.113273°, -82.047481° and is approximately 985 feet southwest of the Kinzelman #3. This water well is located on the Daniel Zisko property and was drilled to a depth of 45 feet in shale, with water at 30 feet and was cased to 27 feet. The water use or quality of this well is not known.

Survey:

A map/plat of the Kinzelman property is included in Exhibit A and shows the property boundaries, the location of the well on the property, the access path to the well, the construction limits for both the access road and well location, and the location of all known utilities on the property. There is an existing fiber optic line that will need to be crossed to reach the Kinzelman #3. This line shall only be traversed in a perpendicular direction where indicated on the Exhibit A.

Engineering Assessment:

An Engineering Assessment was completed by the Division at this site and is included in Exhibit B. This assessment specifies all engineering required to be completed/addressed by the Contractor regarding access to the property, access to the well, well site construction and site restoration. The existing fiber optic line that lies within the project work limits shall be protected at all times during the construction with steel plates that will adequately protect the line. See Exhibit B for mat/plate specifications and requirements.

Radiological Assessment:

A Radiological Assessment was completed by the Division at this site and is included in Exhibit C. This assessment specifies the radiological considerations required to be completed/addressed by the Contractor at this site.

Hydrogeological Assessment:

A Hydrogeological assessment was completed by the Division at this site and is included in Exhibit D. This assessment specifies the hydrogeological considerations required to be completed/addressed by the Contractor at this site.

Environmental Assessment:

An Environmental Assessment was completed by the Division at this site and is included in Exhibit E. This assessment specifies the environmental considerations required to be completed/addressed by the Contractor at this site.

Safety:

A Safety Assessment was completed by the Division at this site and is included in Exhibit F. This assessment specifies the safety considerations required to be completed/addressed by the Contractor at this site.

Site Preparation:

- 1) Access to the property, access to the well and the construction limits for the well location are defined on the map included in Exhibit A. The Contractor will be responsible for staying within the access and construction boundaries defined on this map. If plugging operations are conducted during inclement weather and/or soil conditions dictate, the Contractor will use mats or steel plates to access the well in order to minimize the damage to the property. See Exhibit B for mat/plate specifications and requirements.
- 2) The Contractor may use gravel as a roadbed material at the access point to the property only. Any gravel installed at this point will be removed by the Contractor upon completion of plugging activities unless the Division obtains a waiver, signed by the landowner. The Contractor will not apply stone to any other portion of the farm lane in order to access the well location. The Division will photo-document the condition of the proposed access route prior to moving equipment onto location and after plugging and restoration operations are completed.
- 3) The Contractor will remove 30 feet of the wire fencing, north of the existing farm gate to access this well (see Exhibit A). The contractor will provide a temporary gate during plugging operations and will replace this section of fencing, using comparable materials, upon completion of plugging and restoration activities.
- 4) The Contractor shall follow the provisions stated in Part 7 of the General Scope of Work and/or Exhibit B relating to erosion and sediment control. Topsoil will be stockpiled onsite and re-used during site restoration.
- 5) The Contractor shall follow the provisions stated in Part 8 of the General Scope of Work and/or Exhibits D and E for spill prevention and remediation. This well is located just south of an un-named stream that flows to the southwest into the East Branch Black River.
- 6) The Contractor will supply and use open top steel tanks to collect and store the fluid generated by the cleanout and plugging process. These tanks are to be set a minimum of 20 feet from the well. No earthen pits are to be constructed. The Contractor will be responsible for the proper transportation to and disposal of all generated fluid at a Class II disposal well. The Contractor will provide the Division with documentation of disposal within three (3) days of acceptance at the disposal facility. The Contractor will list the fluid disposal facility they intend to use where indicated on the Bid Sheet.
- 7) The Contractor will excavate all visibly impacted soil at the well site before the commencement of plugging activities. All excavated impacted soil and other solids generated by the well cleanout process that is temporarily stored on site will be kept in a lined and covered roll-off box/half tank. The Contractor will solidify any residual fluid associated with these soils/solids with Portland cement. The Contractor will be responsible for the proper transportation of this material to and disposal at an Ohio Environmental Protection Agency (OEPA) approved solid waste facility. The Contractor will provide the Division with documentation of disposal within three (3) days of acceptance at the disposal facility. The Contractor will list the soil disposal facility they intend to use where indicated on the Bid Sheet.

Well Preparation:

- 1) The Contractor will excavate around and visually examine the existing 5.5-inch diameter casing to evaluate its condition immediately below grade. If this portion of the casing is found to be severely degraded, the Contractor will remove the incompetent section of casing and install enough new casing, of similar diameter, to bring the top of the existing casing to ground level or a suitable working height. Gravel and/or mats may be used in the well area as a base to stabilize the rig. The Contractor will remove this material/equipment, if used, upon completion of plugging activities.

- 2) The Contractor will install an appropriate wellhead and an approved method of well control as specified in Part 11 of the General Scope of Work to insure there is control of gas and/or fluids generated from the well. The Contractor will maintain a minimum of seventy-five (75) barrels of fresh water on location for well control.

Plugging Procedure:

- 1) The Contractor will clean out the hole to its estimated total depth (TD) of 347 feet or a depth approved by the Division.
- 2) If an obstruction is encountered in the well bore that prevents the Contractor from reaching total depth, the Contractor will follow the process described in Part 12 of the General Scope of Work to assess the obstruction and Part 13 for the removal of the obstruction. The Contractor will include the costs for these services on the appropriate line items on the Bid Sheet and will be paid for services rendered.
- 3) Once the well is static, the Contractor will bale the hole dry. The provisions stated in Part 15 of the General Scope of Work referencing Cement will not apply to the plugging of this well. Once the hole is and remains dry, the Contractor will fill the well bore from total depth to within 30 inches of the surface with a Nine Sack Grout mix. The Contractor will mix this grout at a consistency that will allow the grout to flow to the bottom of the well without bridging off in the well bore. If the well cannot be bailed dry the contractor will use a siphon string, that is plumbed to the open top steel tank, when applying the grout in order to evacuate the fluid in the hole. This plug will be allowed to cure for a minimum of eight (8) hours, after which the Contractor will check the grout level and top off with additional grout, if necessary.

Plugged Well Identification:

The Contractor will follow the process stated in Part 16 in the General Scope of Work to identify the well after plugging is completed.

Restoration:

Within three (3) working days after the plugging operation is completed, weather permitting, the Contractor will remove all plugging-related equipment and all fluids, cuttings, and impacted soil from the site and dispose of them according to the process stated in sections six (6) and seven (7) of the Site and Well Preparation section of this scope of work.

Within fifteen (15) working days after the completion of plugging operations, weather permitting, the Contractor will finish grade to as close to its original contour as possible all areas disturbed by the plugging activities and where applicable seed, mulch and fertilize to promote vegetative growth as specified in Part 17 of the General Scope of Work. The access road will be restored to a condition equal to or better than before plugging operations started.

DETAILED WELL SPECIFICATIONS AND PLUGGING REQUIREMENTS

Kinzelman #5
34-103-2-4275-0000
Medina County, Chatham Township
GPS: 41.1153666°, -82.0441600°

Background:

The Kinzelman #5 is located approximately one mile west of the intersection of State Route 83 and Spencer Lake Road, on the north side of Spencer Lake Road, in Chatham Township, Medina County, Ohio. This well is situated on a 25.63 acre parcel (#00409A28003) at 9839 Spencer Lake Rd. (CR 45), owned by Dennis Kinzelman. The well is in an open lot, and is one of 5 wells on the property. Drainage in the well area flows to the south 85 feet into an un-named stream that flows to the southwest into the East Branch Black River.

Available drilling records show that in November of 1985, Jesse Oil drilled the Kinzelman #5 to a total depth of 347 feet, in the Berea Formation. The casing records for this well show that 5.5-inch diameter casing was set at 345 feet and cemented with 60 sacks of cement, with cement circulated to surface. Jesse Oil never submitted a completion report to the Division, and has since forfeited their bond and is no longer in business. The landowner, Mr. Kinzelman, indicated that this was a shot hole. He also stated that all the well on the property had been equipped with submersible pumps.

A Division inspection conducted in 2014 found an exposed 5.5-inch diameter casing open to the atmosphere. A weighted line was run down the well casing to an unobstructed depth of 350 feet.

Available records and maps show that hundreds of Berea wells have been drilled in Chatham Township since the late 1800s. A review of offset well data found drilling and casing data for several Berea wells offset to the Kinzelman #5. The records for these three wells show the following:

- Permit # 4274: Kinzelman #6 is located 200 feet to the northeast. Drilling was completed in November 1985 to a total depth (TD) of 354 feet. This well produced from the Berea Sandstone, however, the thickness of the Berea was not recorded. Records indicate that this well is cased with 5.5-inch diameter casing to 352 feet. Division inspections of this well confirm that this well is equipped with 5.5-inch diameter casing that is open to atmosphere. A weighted line was run down the well casing to an unobstructed depth of **477 feet**. The landowner indicated that this was a shot hole.
- Permit # 4276: Kinzelman #3 is located 350 feet to the south. Drilling was completed in November 1985 to a total depth (TD) of 347 feet. This well produced from the Berea Sandstone, however, the thickness of the Berea was not recorded. Records indicate that this well is cased with 5.5-inch diameter casing to 345 feet. Division inspections of this well confirm that this well is equipped with 5.5-inch diameter casing that is open to atmosphere. The landowner indicated that this was a shot hole.
- Permit # 1236: Located 435 feet to the west. Drilling was completed on 11-30-1959, to a total depth (TD) of 430 feet. This well produced from the Berea Sandstone. The thickness of the Berea is recorded at 81 feet (345 feet-426 feet). This well was cased with 6.625-inch diameter casing to 22 feet and 5.5-inch diameter casing to 161 feet. This was a shot hole. There are no plugging records for this well.

Our database shows that the nearest water wells to the Kinzelman #5 are:

- Kinzelman Private Water Well: is located approximately 850 feet to the southeast of the Kinzelman#5. This water well is located at GPS: 41.11308°, -82.04393° and is at the rear of the Kinzelman home, approximately six (6) feet from the north foundation wall and near the back entry ramp. Records for this well show a total depth of 115 feet in shale, fresh water was encountered at 44 feet and the well was cased to 42 feet. This residential water well is used and tested regularly.

- Permit #437929: located at GPS: 41.113273°, -82.047481° and is approximately 1200 feet southwest of the Kinzelman #5. This water well is located on the Daniel Zisko property and was drilled to a depth of 45 feet in shale, with water at 30 feet and was cased to 27 feet. The water use or quality of this well is not known.

Survey:

A map/plat of the Kinzelman property is included in Exhibit A and shows the property boundaries, the location of the well on the property, the access path to the well, the construction limits for both the access road and well location, and the location of all known utilities on the property. There is an existing fiber optic line and a stream that will need to be crossed to reach the Kinzelman #5. This fiber optic line and stream shall only be traversed where indicated on the Exhibit.

Engineering Assessment:

An Engineering Assessment was completed by the Division at this site and is included in Exhibit B. This assessment specifies all engineering required to be completed/addressed by the Contractor regarding access to the property, access to the well, utility and stream crossing, well site construction and site restoration. The existing fiber optic line and stream crossing that lie within the project work limits shall be protected at all times as specified in Exhibit B.

Radiological Assessment:

A Radiological Assessment was completed by the Division at this site and is included in Exhibit C. This assessment specifies the radiological considerations required to be completed/addressed by the Contractor at this site.

Hydrogeological Assessment:

A Hydrogeological assessment was completed by the Division at this site and is included in Exhibit D. This assessment specifies the hydrogeological considerations required to be completed/addressed by the Contractor at this site.

Environmental Assessment:

An Environmental Assessment was completed by the Division at this site and is included in Exhibit E. This assessment specifies the environmental considerations required to be completed/addressed by the Contractor at this site.

Safety:

A Safety Assessment was completed by the Division at this site and is included in Exhibit F. This assessment specifies the safety considerations required to be completed/addressed by the Contractor at this site.

Site Preparation:

- 1) Access to the property, access to the well and the construction limits for the well location are defined on the map included in Exhibit A. The Contractor will be responsible for staying within the access and construction boundaries defined on this map. If plugging operations are conducted during inclement weather and/or soil conditions dictate, the Contractor will use wooden/synthetic mats or steel plates to access the well in order to minimize the damage to the property. See Exhibit B for mat/plate specifications and requirements.
- 2) The Contractor may use gravel as a roadbed material at the access point to the property only. Any gravel installed at this point will be removed by the Contractor upon completion of plugging activities unless the Division obtains a waiver, signed by the landowner. The Contractor **will not** apply stone to any other portion of the farm lane in order to access the well location. The Division will photo-document the condition of the proposed access route prior to moving equipment onto location and after plugging and restoration operations are completed.

- 3) The Contractor will use the existing narrow gravel stream crossing, indicated on Exhibit A, to access the area north of the stream, to reach the Kinselman #5. The Contractor will refer to Exhibit B for specific construction details in protecting this stream crossing to access the well in order to minimize the damage to the property and stream.
- 4) The Contractor will remove 40 feet of the wire fencing, south of the existing farm gate to access this well (see Exhibit A). The contractor will provide a temporary gate during plugging operations and will replace this section of fencing, using comparable materials, upon completion of plugging and restoration activities.
- 5) The Contractor shall follow the provisions stated in Part 7 of the General Scope of Work and/or Exhibit B relating to erosion and sediment control. Topsoil will be stockpiled onsite and re-used during site restoration.
- 6) The Contractor shall follow the provisions stated in Part 8 of the General Scope of Work and/or Exhibits D and E for spill prevention and remediation. This well is located just north of an un-named stream that flows to the southwest into the East Branch Black River.
- 7) The Contractor will supply and use open top steel half tanks to collect and store the fluid generated by the cleanout and plugging process. These tanks are to be set a minimum of 20 feet from the well. No earthen pits are to be constructed. The Contractor will be responsible for the proper transportation to and disposal of all generated fluid at a Class II disposal well. The Contractor will provide the Division with documentation of disposal within three (3) days of acceptance at the disposal facility. The Contractor will list the fluid disposal facility they intend to use where indicated on the Bid Sheet.
- 8) The Contractor will excavate all visibly impacted soil at the well site before the commencement of plugging activities. All excavated impacted soil and other solids generated by the well cleanout process that is temporarily stored on site will be kept in a lined and covered roll-off box/half tank. The Contractor will solidify any residual fluid associated with these soils/solids with Portland cement. The Contractor will be responsible for the proper transportation of this material to and disposal at an approved Ohio Environmental Protection Agency (OEPA) approved solid waste facility. The Contractor will provide the Division with documentation of disposal within three (3) days of acceptance at the disposal facility. The Contractor will list the soil disposal facility they intend to use where indicated on the Bid Sheet.

Well Preparation:

- 1) The Contractor will excavate around and visually examine the existing 5.5-inch diameter casing to evaluate its condition immediately below grade. If this portion of the casing is found to be severely degraded, the Contractor will remove the incompetent section of casing and install enough new casing, of similar diameter, to bring the top of the existing casing to ground level or a suitable working height. Gravel and/or mats may be used in the well area as a base to stabilize the rig. If gravel is used, it will be removed upon completion of plugging activities.
- 2) The Contractor will install an appropriate wellhead and an approved method of well control as specified in Part 11 of the General Scope of Work to insure there is control of gas and/or fluids generated from the well. The Contractor will maintain a minimum of seventy-five (75) barrels of fresh water on location for well control.

Plugging Procedure:

- 1) The Contractor will clean out the hole to its estimated total depth (TD) of 347 feet or a depth approved by the Division.
- 2) If an obstruction is encountered in the well bore that prevents the Contractor from reaching total depth, the Contractor will follow the process described in Part 12 of the General Scope of Work to assess the obstruction and Part 13 for the removal of the obstruction. The Contractor will include the costs for these services on the appropriate line items on the Bid Sheet and will be paid for services rendered.

- 3) Once the well is static, the Contractor will bale the hole dry. The provisions stated in Part 15 of the General Scope of Work referencing Cement will not apply to the plugging of this well. Once the hole is and remains dry, the Contractor will fill the well bore from total depth to within 30 inches of the surface with a nine Sack Grout mix. The Contractor will mix this grout at a consistency that will allow the grout to flow to the bottom of the well without bridging off in the well bore. If the well cannot be bailed dry the contractor will use a siphon string, that is plumbed to the open top steel tank, when applying the grout in order to evacuate the fluid in the hole. This plug will be allowed to cure for a minimum of eight (8) hours, after which the Contractor will check the grout level and top off with additional grout, if necessary.

Plugged Well Identification:

The Contractor will follow the process stated in Part 16 in the General Scope of Work to identify the well after plugging is complete.

Restoration:

Within three (3) working days after the plugging operation is completed, weather permitting, the Contractor will remove all plugging-related equipment and all fluids, cuttings, and impacted soil from the site and dispose of them according to the process stated in sections seven (7) and eight (8) of the Site and Well Preparation section of this scope of work.

Within fifteen (15) working days after the completion of plugging operations, weather permitting, the Contractor will finish grade to as close to its original contour as possible all areas disturbed by the plugging activities and where applicable seed, mulch and fertilize to promote vegetative growth as specified in Part 17 of the General Scope of Work. The access road will be restored to a condition equal to or better than before plugging operations started.

DETAILED WELL SPECIFICATIONS AND PLUGGING REQUIREMENTS

Kinzelman #6
34-103-2-4274-0000
Medina County, Chatham Township
GPS: 41.1158185°, -82.0437180°

Background:

The Kinzelman #6 is located approximately one mile west of the intersection of State Route 83 and Spencer Lake Road, on the north side of Spencer Lake Road, in Chatham Township, Medina County, Ohio. This well is situated on a 25.63 acre parcel (#00409A28003) at 9839 Spencer Lake Rd. (CR 45), owned by Dennis Kinzelman. The well is in an open lot, and is one of five (5) wells on the property. Drainage in the area flows to the east 105 feet into a private pond and to the north 450 feet into an un-named stream that flows to the southwest into the East Branch Black River.

Available drilling records show that in November of 1985, Jesse Oil drilled the Kinzelman #6 to a total depth of **354 feet**, in the Berea Formation. The casing records for this well show that 5.5-inch diameter casing was set at 352 feet and cemented with 60 sacks of cement, with cement circulated to surface. Jesse Oil never submitted a completion report to the Division, and has since forfeited their bond and is no longer in business. The landowner, Mr. Kinzelman, indicated that this was a shot hole. He also stated that all the wells on the property had been equipped with submersible pumps.

A Division inspection conducted in 2014 found an exposed 5.5-inch diameter casing open to the atmosphere. **A weighted line was run into the well casing to an unobstructed depth of 477 feet, which is 123 feet deeper than the completion records show.**

Available records and maps show that hundreds of Berea wells have been drilled in Chatham Township since the late 1800's. A review of offset well data found drilling and casing data for several Berea wells offset to the Kinzelman #6: #4961 and #4965 are located to the south and #1236 is located to the west of the Kinzelman #6. The records for these three wells show the following:

- Permit # 4275: Kinzelman #5 is located 200 feet to the southwest. Drilling was completed in November 1985 to a total depth (TD) of 347 feet. Records indicate that this well is cased with 5.5-inch diameter casing to 345 feet. Division inspections of this well confirm that this well is equipped with 5.5-inch diameter casing that is open to atmosphere. A weighted line was run down the well casing to an unobstructed depth of 350 feet. The landowner indicated that this was a shot hole.
- Permit # 1236: Located 435 feet to the west. Drilling was completed on 11-30-1959, to a total depth (TD) of 430 feet. This well produced from the Berea Sandstone. The thickness of the Berea is recorded at 81 feet (345 feet-426 feet). This well was cased with 6.625-inch diameter casing to 22 feet and 5.5-inch diameter casing to 161 feet. This was a shot hole. There are no plugging records for this well.

Our database shows that the nearest water wells to the Kinzelman #6 are:

- Kinzelman Private Water Well: is located approximately 1000 feet to the south of the Kinzelman #6. This water well is located at GPS: 41.11308°, -82.04393° and is at the rear of the Kinzelman home, approximately six feet from the north foundation wall and near the back entry ramp. Records for this well show a total depth of 115 feet in shale, fresh water was encountered at 44 feet and the well was cased to 42 feet. This residential water well is used and tested regularly by the property owner.
- Permit #437929: is located at GPS: 41.113273°, -82.047481° and is approximately 1400 feet southwest of the Kinzelman #6. This water well is located on the Daniel Zisko property and was drilled to a depth of 45 feet in shale, with water at 30 feet and was cased to 27 feet. The water use or quality of this well is not known.

Survey:

A map/plat of the Kinzelman property is included in Exhibit A and shows the property boundaries, the location of the well on the property, the access path to the well, the construction limits for both the access road and well location, and the location of all known utilities on the property. There is an existing fiber optic line and a stream that will need to be crossed to reach the Kinzelman #6. This fiber optic line and stream shall only be traversed where indicated on the Exhibit.

Engineering Assessment:

An Engineering Assessment was completed by the Division at this site and is included in Exhibit B. This assessment specifies all engineering required to be completed/addressed by the Contractor regarding access to the property, access to the well, utility and stream crossing, well site construction and site restoration. The existing fiber optic line and stream crossing that lie within the project work limits shall be protected at all times as specified in Exhibit B.

Radiological Assessment:

A Radiological Assessment was completed by the Division at this site and is included in Exhibit C. This assessment specifies the radiological considerations required to be completed/addressed by the Contractor at this site.

Hydrogeological Assessment:

A Hydrogeological assessment was completed by the Division at this site and is included in Exhibit D. This assessment specifies the hydrogeological considerations required to be completed/addressed by the Contractor at this site.

Environmental Assessment:

An Environmental Assessment was completed by the Division at this site and is included in Exhibit E. This assessment specifies the environmental considerations required to be completed/addressed by the Contractor at this site.

Safety:

A Safety Assessment was completed by the Division at this site and is included in Exhibit F. This assessment specifies the safety considerations required to be completed/addressed by the Contractor at this site.

Site Preparation:

- 1) Access to the property, access to the well and the construction limits for the well location are defined on the map included in Exhibit A. The Contractor will be responsible for staying within the access and construction boundaries defined on this map. If plugging operations are conducted during inclement weather and/or soil conditions dictate, the Contractor will use wooden/synthetic mats or steel plates to access the well in order to minimize the damage to the property. See Exhibit B for mat/plate specifications and requirements.
- 2) The Contractor will use gravel as a roadbed material at the access point to the property only. Any gravel installed at this point will be removed by the Contractor upon completion of plugging activities unless the Division obtains a waiver, signed by the landowner. The Contractor **will not** apply stone to any other portion of the farm lane in order to access the well location. The Division will photo-document the condition of the proposed access route prior to moving equipment onto location and after plugging and restoration operations are completed.
- 3) The Contractor will use the existing narrow gravel stream crossing, indicated on Exhibit A, to access the area north of the stream, to reach the Kinzelman #6. The Contractor will refer to Exhibit B for specific construction details in protecting this stream crossing to access the well in order to minimize the damage to the property and stream.

- 4) The Contractor shall follow the provisions stated in Part 7 of the General Scope of Work and/or Exhibit B relating to erosion and sediment control. Topsoil will be stockpiled onsite and re-used during site restoration.
- 5) The Contractor shall follow the provisions stated in Part 8 of the General Scope of Work and/or Exhibits D and E for spill prevention and remediation. This well is located just north of an un-named stream that flows to the southwest into the East Branch Black River.
- 6) The Contractor will supply and use open top steel tanks to collect and store the fluid generated by the cleanout and plugging process. These tanks are to be set a minimum of 20 feet from the well. No earthen pits are to be constructed. The Contractor will be responsible for the proper transportation to and disposal of all generated fluid at a Class II disposal well. The Contractor will provide the Division with documentation of disposal within three (3) days of acceptance at the disposal facility. The Contractor will list the fluid disposal facility they intend to use where indicated on the Bid Sheet.
- 7) The Contractor will excavate all visibly impacted soil at the well site before the commencement of plugging activities. All excavated impacted soil and other solids generated by the well cleanout process that is temporarily stored on site will be kept in a lined and covered roll-off box/half tank. The Contractor will solidify any residual fluid associated with these soils/solids with Portland cement. The Contractor will be responsible for the proper transportation of this material to and disposal at an Ohio Environmental Protection Agency (OEPA) approved solid waste facility. The Contractor will provide the Division with documentation of disposal within three (3) days of acceptance at the disposal facility. The Contractor will list the soil disposal facility they intend to use where indicated on the Bid Sheet.

Well Preparation:

- 1) The Contractor will excavate around and visually examine the existing 5.5-inch diameter casing to evaluate its condition immediately below grade. If this portion of the casing is found to be severely degraded, the Contractor will remove the incompetent section of casing and install enough new casing, of similar diameter, to bring the top of the existing casing to ground level or a suitable working height. Gravel and/or mats may be used in the well area as a base to stabilize the rig. If gravel is used, it will be removed upon completion of plugging activities.
- 2) The Contractor will install an appropriate wellhead and an approved method of well control as specified in Part 11 of the General Scope of Work to insure there is control of gas and/or fluids generated from the well. The Contractor will maintain a minimum of seventy-five (75) barrels of fresh water on location for well control.

Plugging Procedure:

- 1) The Contractor will clean out the hole to its estimated total depth (TD) of 477 feet or a depth approved by the Division.
- 2) If an obstruction is encountered in the well bore that prevents the Contractor from reaching total depth, the Contractor will follow the process described in Part 12 of the General Scope of Work to assess the obstruction and Part 13 for the removal of the obstruction. The Contractor will include the costs for these services on the appropriate line items on the Bid Sheet and will be paid for services rendered.
- 3) Once the well is static, the Contractor will bale the hole dry. The provisions stated in Part 15 of the General Scope of Work referencing Cement will not apply to the plugging of this well. Once the hole is and remains dry, the Contractor will fill the well bore from total depth to within 30 inches of the surface with a Nine Sack Grout mix. The Contractor will mix this grout at a consistency that will allow the grout to flow to the bottom of the well without bridging off in the well bore. If the well cannot be bailed dry the contractor will use a siphon string, that is plumbed to the open top steel tank, when applying the grout in order to evacuate the fluid in the hole. This plug will be allowed to cure for a minimum of eight (8) hours, after which the Contractor will check the grout level and top off with additional grout, if necessary.

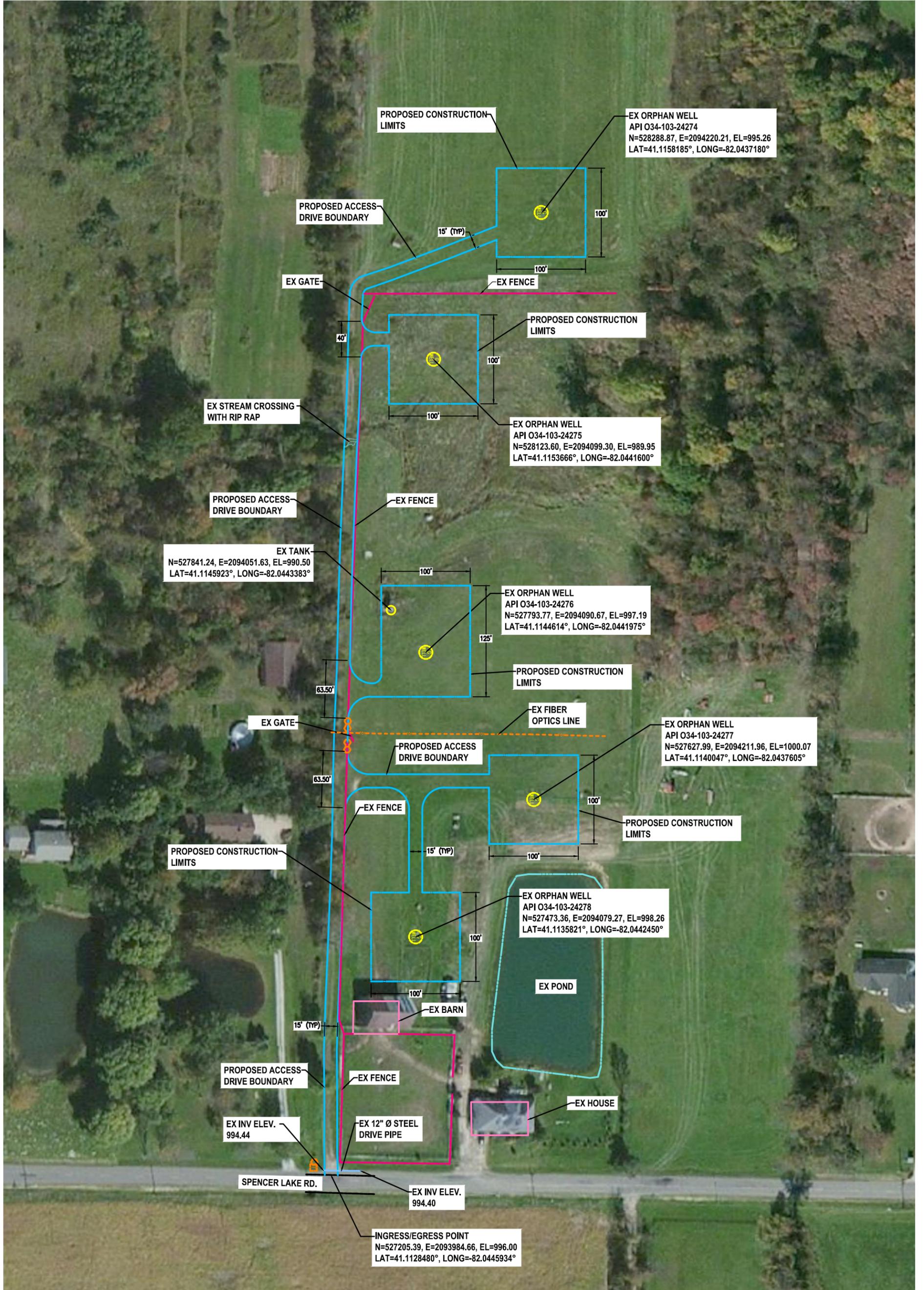
Plugged Well Identification:

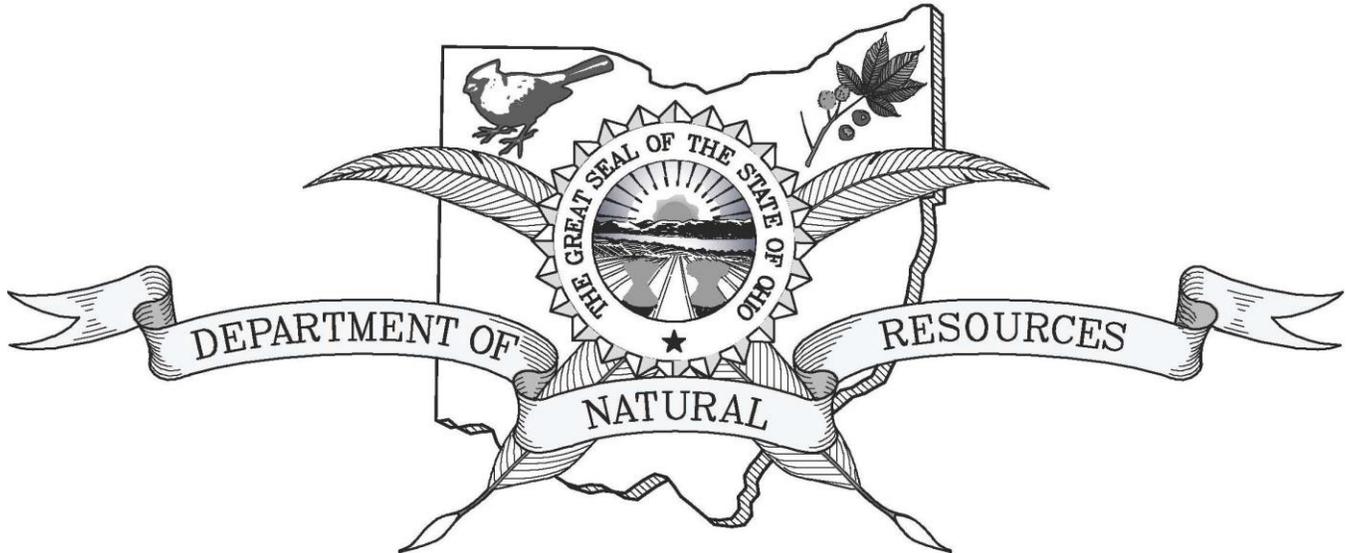
The Contractor will follow the process stated in Part 16 in the General Scope of Work to identify the well after plugging is completed.

Restoration:

Within three (3) working days after the plugging operation is completed, weather permitting, the Contractor will remove all plugging-related equipment and all fluids, cuttings, and impacted soil from the site and dispose of them according to the process stated in sections six (6) and seven (7) of the Site and Well Preparation section of this scope of work.

Within fifteen (15) working days after the completion of plugging operations, weather permitting, the Contractor will finish grade to as close to its original contour as possible all areas disturbed by the plugging activities and where applicable seed, mulch and fertilize to promote vegetative growth as specified in Part 17 of the General Scope of Work. The access road will be restored to a condition equal to or better than before plugging operations started.





DIVISION OF OIL & GAS RESOURCES MANAGEMENT

STATE OF OHIO

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL & GAS RESOURCES MANAGEMENT

2045 MORSE ROAD

BUILDING F, THIRD FLOOR

COLUMBUS, OHIO 43229-6693

EXHIBIT B: ENGINEERING & SITE PREPARATION

KINZELMAN ORPHAN WELL SITES

API: 34-103-2-4278

API: 34-103-2-4277

API: 34-103-2-4276

API: 34-103-2-4275

API: 34-103-2-4274

MEDINA COUNTY, OHIO

KINZLEMAN ORPHAN WELL SITES
PLAN SPECIFICATIONS

34-103-2-4278

34-103-2-4277

34-103-2-4276

34-103-2-4275

34-103-2-4274

MOBILIZATION

- A. Description: This work shall consist of the development of access and the mobilization of the Contractor's forces and equipment necessary for performing **all of the work** required under the contract.

This item shall include the transportation of personnel, equipment, and supplies to and from the site as well as the maintenance of all onsite access roads.

All associated costs required to traverse, setup and teardown any plugging/miscellaneous equipment between each of the other wells to be plugged on the same property shall be paid under the contract unit price bid for "**Rig Time**" for each individual well.

- B. Execution: No additional compensation shall be made to the Contractor for remobilization after his equipment has been removed from the site. If applicable, this shall include remobilization of equipment if removed due to winterization of the project.

Any damage to the road, drives, and/or culverts caused by the mobilization/demobilization shall be repaired by the contractor at the contractor's expense. All repairs shall be done equal to or better to that which existed prior to construction activities.

- C. Measurement: Payment shall be made upon delivery of all major equipment.

- D. Payment: The cost of this work shall be included in the contract lump sum price bid for "**Mobilization**" once all major equipment to be used has been delivered to the first well site.

ROAD MATS

- A. Description: This item shall consist of the transportation, delivery, installation, and removal of road mats as described. The placement of road mats within the limits of construction shall be at the discretion of the Chief. This item shall be utilized to protect the existing utilities, driveways, roadway, curbs, and sidewalks that will be traversed within the construction work limits.

- B. Timber Mats: Timber mats shall be placed over the existing stream crossing to further protect the existing stream crossing. Timber matting shall be in place during all equipment traversing of the existing stream crossing. Timber matting shall be composed of dense hardwood, shall be a minimum of six inches thick, eight feet wide, and twelve

feet long, and shall have a minimum of one and one-quarter inch diameter lift bolts installed at each end and through the width of the mat.

- C. Measurement: Payment shall be made upon installation of road mats at the site. Each road mat shall be measured for a square foot installed.
- D. Payment: The cost of this work shall be included in the contract square foot price bid for "**Road Mats**".

STEEL ROAD PLATES

- A. Description: This item shall consist of the transportation, delivery, installation, and removal of steel road plates as described. The placement of steel road plates within the limits of construction shall be at the discretion of the Chief. This item shall be utilized to protect the existing utilities, driveways, roadway, curbs, and sidewalks that will be traversed within the construction work limits.
- B. Steel Plates: An existing fiber optic line within the project work limits shall only be traversed in a perpendicular direction where indicated on the Exhibit A. The fiber optic line shall be protected during all equipment traversing with steel plates that will adequately protect the line. Steel plate shall be fabricated from ASTM A36 steel, be a minimum of 1-inch thick, 4 feet wide and eight feet long, and shall be able to withstand H-20 traffic loading (truck axle loading of 32,000 pounds or wheel loading of 16,000 pounds). Steel plates shall extend a minimum of 4 feet beyond the fiber optic line in the direction the line will be traversed.
- C. Measurement: Payment shall be made upon installation of steel road plates at the site. Each steel road plate shall be measured for a square foot installed.
- D. Payment: The cost of this work shall be included in the contract square foot price bid for "**Steel Road Plates**".

SILT FENCE AND INSTALLATION

- A. General: This item covers construction of the silt fences and/or straw bale dikes. The Chief may designate utilization of silt fence, straw bale dikes or a combination of both at locations selected for placement.

The placement of silt fence and straw bale dikes within the limits of construction shall be at the discretion of the Chief.

During the life of the Contract, the Contractor shall maintain these silt and erosion-control structures. Accumulated silt shall be removed when it, in the Chief's opinion, may damage or reduce the effectiveness of the structure.

- B. Straw Bale Dikes
 - 1. Materials: Straw bale dikes shall be constructed with twine-bound square straw or hay bales, staked to remain in place.

2. Installation and Execution: The location of the dikes shall be as directed by the Chief, at the time of construction. When the usefulness of the dikes has ended, they shall be removed and disposed. Dikes may remain in place upon completion of the project only when permitted by the Chief.

C. Silt Fence

1. Materials

- a. The silt fence fabric shall conform to the Item 712.09, Type C of the 2016 ODOT Specifications. The silt fence shall be installed in accordance with all manufacturers' instructions

The fabric shall be free of any treatment that might significantly alter its physical properties. During shipment and storage, the fabric shall be wrapped in a heavy-duty protective covering to protect it from direct sunlight, dirt, and other debris.

The manufacturer shall submit certified test data to cover each shipment of material.

- b. The silt fence used shall be a prefabricated silt fence with fabric already attached to posts or shall be assembled in the field according to the following installation guidelines.

The fabric shall be a pervious sheet composed of a strong, rot-proof polymeric yard or fiber oriented into a stable network, which retains its relative structure during handling, placement, and long-term service. It shall have excellent resistance to deterioration from ambient temperatures, acid, and alkaline conditions, and shall be indestructible to microorganisms and insects. The material shall be resistant to deterioration by ultraviolet light and protected until placement as recommended by the manufacturer such that no deterioration occurs. During shipment and storage, the rolls of fabric shall be protected against deterioration from the sun, mud, dirt, dust and other harmful conditions at all times until their use.

2. Installation Guidelines for Silt Fence: Silt fence shall be installed in the following manner.

- a. First, a small toe-in trench shall be dug along the line where the silt fence is to be placed. The trench shall be a minimum of 6" deep and 6" wide. The excavated material shall be placed on the front or uphill side of the trench to facilitate backfilling later.
- b. Next, fence posts shall be driven into the back or downstream side of the trench. The posts shall be driven so that at least 1/3 of the height of the post is in the ground. When installing a prefabricated silt fence with fabric attached to the posts, the posts shall be driven so that at least 6" of fabric shall be buried in the ground. Most prefabricated silt fences have posts spaced approximately 6'-8' apart, which is usually adequate. If there is a low spot where most sediment tends to collect, the prefabricated silt fences can be backed up with bale backup. Posts shall be hardwood with sufficient strength to support a full load of deposited sediment.

- c. Finally the trench shall be backfilled with the excavated material and tamped so that at least 6" of the fabric is securely toed into the ground to prevent under-mining.
 - d. The silt fences shall be maintained throughout construction. The Contractor shall conduct regular inspections and after all heavy rains. Damaged fences must be repaired immediately.
 - e. At the completion of construction and upon establishment of suitable vegetation as determined by the Chief, all silt fence structures shall be removed. Areas disturbed by the removal operation including temporary access roads shall be revegetated. In general, this operation shall consist of regrading, re-fertilizing, reseeding and mulching.
- D. Measurement: Measurement for the above-described work shall be made by actual field measurements. When using Silt Fence with Bale Backup the measurement shall be the length of the Silt Fence installed, plus the length of the Straw Bale Dike installed.
- E. Payment for Silt Fence and Straw Bale Dikes: Payment for this item shall be made at the contract unit price bid per linear foot of "**Silt Fence and Installation**".

SECONDARY CONTAINMENT

- A. Description: This item shall include the labor and materials needed for the installation, maintenance, and deconstruction of secondary containment for all staged equipment and liquid storage containers utilized on-site that store brine or other oilfield waste substances during the project. In determining the method, design, and capacity for secondary containment, the contractor shall address the typical failure mode, and the most likely quantity of brine or other oil field waste substance that would be discharged.
- B. Materials: The contractor shall supply catchment basins or diversion structures to intercept and contain discharges of brine or other oilfield waste substances during the project. Materials shall consist of impermeable containers or liners made of a material that is compatible with the waste stored or used within the containment. Any containment material that meets a coefficient of permeability of no greater than 1×10^{-10} cm/sec and has supporting documentation of the permeability, chemical compatibility, and other applicable QA/QC standards, is acceptable.

Materials shall be durable enough to support the weight of heavy equipment used for the plugging operations. Materials shall have sufficient strength and thickness to maintain the integrity of the container or liner. The container or liner shall be designed, constructed, and maintained so that the physical and chemical characteristics of the container or liner are not adversely affected by the waste and the container or liner is resistant to physical, chemical and other failure during transportation, handling, installation and use.

Liner walls shall consist of metal, wood, concrete, or plastic. Wall materials shall be designed, constructed, and maintained to withstand the overtopping and sliding forces of secondary containment filled to capacity.

The Chief shall determine the merit of the proposed materials compatibility, impermeability, integrity, and durability in determining if the material is sufficient for the project.

- C. Installation: Secondary containment shall be installed for staged equipment and liquid storage containers utilized on-site that store brine or other oilfield waste substances during the project. Secondary containment shall be installed prior to any drilling or liquid storage at the project site.

Upon request of the Chief the contractor shall provide calculations in tabular format of the containment providing both the secondary containment capacity and the on-site material storage. The chief can require that sections of a secondary containment be removed for inspection and sampling if a spill occurs during the project.

Installation of the containers or liners, including seams and pipe penetrations, shall be in accordance with the manufacturer's recommendations. All seams and non-seam area of the container or liner shall be inspected by the Chief for defects, holes, and blisters.

Care shall be taken when operating equipment on or near the container or liner to prevent any damage to the secondary containment. If damage occurs, it shall be repaired by the contractor at his/her expense prior to continuing the project.

The Contractor shall retain all ownership and responsibility for the secondary containment. All secondary containment shall be removed from the site and retained by the contractor at the conclusion of the project.

- D. Measurement: Secondary containment, which includes all materials, labor, and equipment necessary to provide the required secondary containment, will be considered and measured as a unit satisfactorily completed and accepted by the Chief. Secondary containment shall not be considered complete until all secondary containment has been removed from the site at the completion of the project.
- E. Payment: Payment for this work shall include all material, labor, and equipment necessary to complete the work and be made at the contract lump sum price bid for "**Secondary Containment**".

DEMOBILIZATION

- A. Description: This work shall consist of the demobilization of all personnel, plugging related equipment and materials as well as the cleanup of all areas upon completing all of the work required under the contract.

All associated costs required to traverse, setup and teardown any plugging/miscellaneous equipment between each of the other wells to be plugged on the same property shall be paid under the contract unit price bid for "**Rig Time**" for each individual well.

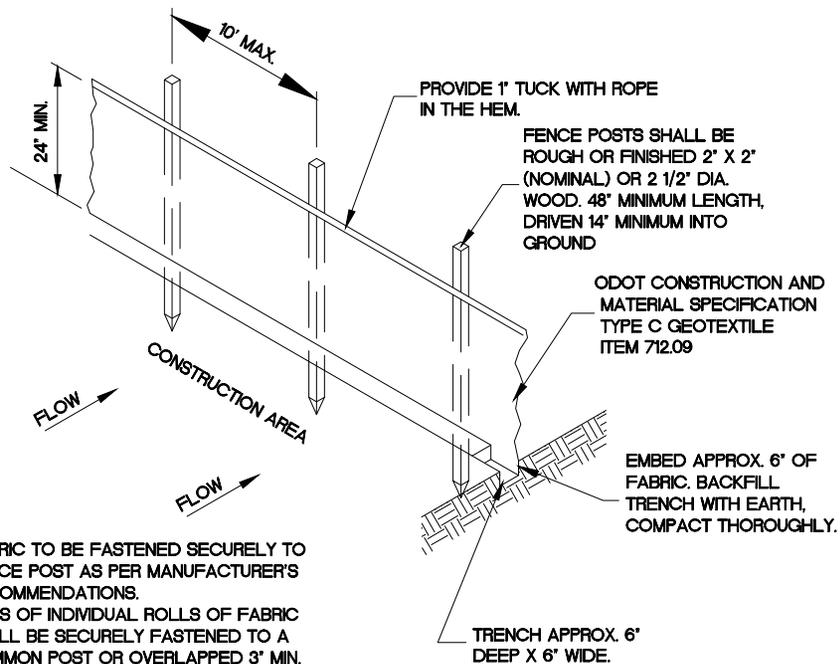
- B. Execution: Any damage to the road, drives, and/or culverts caused by the demobilization shall be repaired by the contractor at the contractor's expense. All repairs shall be done equal to or better to that which existed prior to construction activities.

- C. Measurement: Payment shall be made upon final demobilization of all onsite equipment and the cleanup of all areas.
- D. Payment: The cost of this work shall be included in the contract lump sum price bid for "**Demobilization**".



DATE:
SEPTEMBER 2016

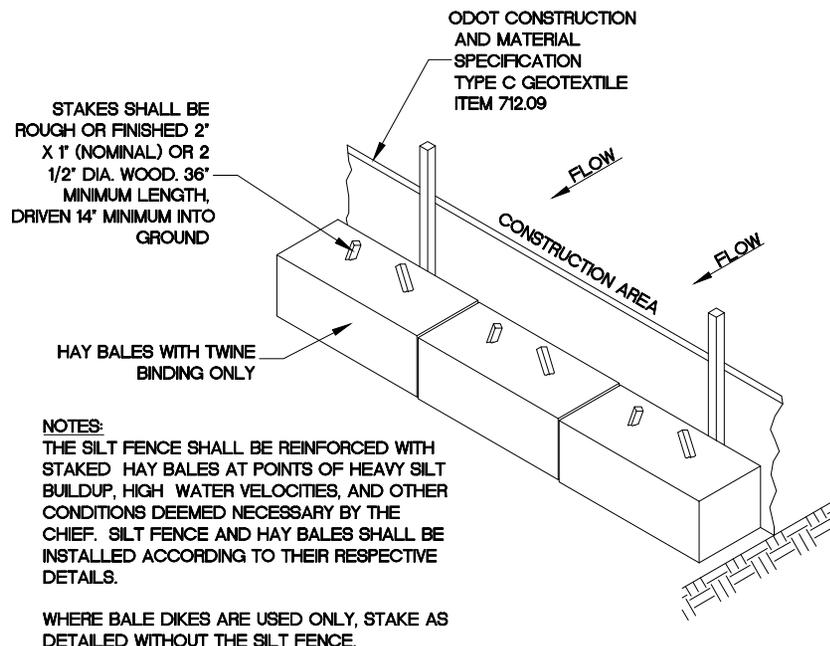
DESIGN UNIT
O&G ENGINEERING
P.E. J. SIMMERMAN
P.E.



- NOTES:
1. FABRIC TO BE FASTENED SECURELY TO FENCE POST AS PER MANUFACTURER'S RECOMMENDATIONS.
 2. ENDS OF INDIVIDUAL ROLLS OF FABRIC SHALL BE SECURELY FASTENED TO A COMMON POST OR OVERLAPPED 3' MIN.

SILT FENCE DETAIL

NOT TO SCALE



SILT FENCE DETAIL

WITH BALE BACKUP
NOT TO SCALE



Richard J. Simmers, Chief

Division of Oil and Gas Resources Management
2045 Morse Road, Bldg. F2
Columbus, OH 43229-6693
Phone: (614) 265-6922
Fax: (614) 265-6910

December 14, 2016

EXHIBIT C

Radiological Assessment

Technologically enhanced naturally occurring radioactive material (TENORM) as referenced in Ohio Revised Code 1509.074 (C)(1) means naturally occurring radioactive material whose radionuclide concentrations are increased by or as a result of past or present human practices.

Crude oil, production brine, in their natural in-the-ground state are considered naturally occurring radioactive material (NORM). When humans place crude oil in a tank a concentrated crude oil sludge accumulates over many years in the bottom below the outlet valve. The concentrated accumulation is TENORM. Ohio Administrative Code 3701:1-43-07 (A) sets the exempt limit for TENORM at concentrations less than five picocuries per gram, excluding natural background, of radium-226 and radium-228.

When a tubular carries crude oil and natural gas (both NORM) to the surface, scale may build up in the tubular, flow lines, and storage equipment over time. The scale is TENORM. Ohio Administrative Code 3701:1-43-07 (G) sets the exemption limit for TENORM in the recycling process containing scale at less than or equal to 50 micro-rem per hour

Radiological surveys of accessible items associated with the 2 wells listed below were conducted on September 27, 2016. The survey did not find:

- Radioactivity in excess of the Ohio Administrative Code 3701:1-43-07 (A) exemption for TENORM containing or contaminated at concentrations less than five picocuries per gram, excluding natural background, of radium-226 and radium-228, or
- Radiation readings in excess of the Ohio Administrative Code 3701:1-43-07 (G) limit of 50 micro-rem per hour for TENORM in the recycling process containing scale.

<u>Well Name</u>	<u>Permit No.</u>
Kinzelman #1	34-103-2-4278
Kinzelman #2	34-103-2-4277

A review of the information on file with the Division of Oil and Gas Resources Management for the 3 wells listed below finds that there is no tubular, casing, flow lines, or oil/brine storage equipment to be removed, therefore an on-site radiological survey is not warranted.

<u>Well Name</u>	<u>Permit No.</u>
Kinzelman #3	34-103-2-4276
Kinzelman #5	34-103-2-4275
Kinzelman #6	34-103-2-4274

Based on these findings, it is unlikely that non-exempt TENORM is present at these well sites. Therefore, radiological controls do not need to be included in the specific scope of work plans for these 5 wells.



Chuck McCracken, Manager
Radiation Safety Section
Division of Oil Gas Resources Management
(614) 265-6672
Charles.McCracken@dnr.state.oh.us



Exhibit D – Hydrogeology/Geology

January 11, 2017



The geology and hydrogeology within a 500 foot radius of the Kinzelman wells were reviewed to identify groundwater resources and geological features in need of protection or specific measures that need to be taken to prevent an environmental impact.

The area of review (AOR) for the Kinzelman wells is covered by five different soil types. Wells #1, #2, and #6 are in the Mahoning silt loam (MgB). Runoff is medium to rapid. Water tends to collect in low spots or forms seeps at or near the base of slopes. Seasonal wetness is a severe limitation to the use of this soil. This soil has slow permeability and is plastic and sticky when wet. These are limitations for most nonfarm uses. Well #3 straddles the Mahoning silt loam and the Ellsworth silt loam (EIC2). In cultivated areas, runoff is rapid and the hazard of erosion is very severe. The surface layer is sticky when wet and in many places, it is cloddy and difficult to till. Slope, slow permeability, a clayey subsoil, and seasonal wetness are limitations for many nonfarm uses. Well #5 is in the Lobdell silt loam (Le). Flooding is common on this soil late in winter and in spring. Flooding and wetness are limitations for most farm and nonfarm uses. These soils are developed upon glacial till overlying shale bedrock. Till is an unconsolidated, poorly-sorted, non-stratified (layered) mixture of clay, silt, sand, and gravel directly deposited by ice (Angle, 1994). The till varies in thickness and is unsorted.

Based on ODNR water well log #806453, there is approximately 32 feet of unconsolidated material (soil and till) over shale bedrock. The bedrock nearest the surface is the Cuyahoga Formation of lower Mississippian age. The Cuyahoga is highly variable and is composed of alternating beds of thin shale, sandy shale, siltstone, and sandstone. In western Medina County, the Cuyahoga Formation is predominantly a thin-bedded, flat-lying shale. The compact, fractured shales contain minor lenses of sandstone and sandy shale. The upper, weathered portion of the shale is the most productive as an aquifer.

“Ground water [is] developed from the sandstone and shale formations of the Cuyahoga Group. Yields of 3 to 15 gallons per minute, adequate for private domestic supplies, are available. Drillers may encounter thick deposits of clayey till interbedded with thin lenses of sand and gravel in morainal areas. Sand and gravel [lenses] may yield 3 to 10 gallons per minute or wells are drilled into the underlying bedrock” (Schmidt, 1978). Although ground water occurs in both the glacial deposits and in the intersecting bedrock fractures, the bedrock is the principle aquifer. The glacial till serves as a source of recharge to the underlying bedrock. In this area, water wells have encountered brackish water, salt water, and oil residue from oil well drilling. Ground water is encountered at depths of 30 to 50 feet (Angle, 1994) and generally flows southward mimicking surface drainage.

The deepest Underground Source of Drinking Water (USDW) is mapped in the Berea sandstone at an elevation of 600 feet above mean sea level (amsl). The surface elevations of the permits are surveyed between 990 and 1,000 (amsl), which puts the USDW approximately between 400 feet bgl. The shallow oil wells in Chatham Township, including the Kinzelman wells targeted the Berea for

production. Fresh water, prior to oilfield contamination of the bedrock aquifer(s) in the 1930s and 1940s, was produced from fractured, weathered shale of the Cuyahoga Formation at its interface with glacial till.

Field reconnaissance found one water well within the area of review. A well (log #806453) exists at 9839 Spencer Lake Road. It is located at coordinates N41.11308°, W82.04393° ±10 feet (NAD83). The well is 115 feet deep with 42 feet of steel casing. Shale bedrock was encountered 32 feet bgl. Some occupied dwellings get their domestic water from either a public source through a buried line along Spencer Lake Road or surface impoundments. Groundwater in the area is sparsely utilized due to contamination by brine and oil. The work zone does not fall within any source water protection zones.

There are three water impoundments and one stream located within the area of review. Based on elevation and drainage patterns the impoundments are not in the path of runoff from a surface spill and have not been sampled for baseline quality. The stream runs east-west between wells #3 and #5 and has not sampled for baseline quality. Should a spill occur, an upstream and downstream sample will be taken for qualitative comparison. See “Exhibit E – Environmental” for further details on surface water.

Protection of surface water and groundwater resources for any future development shall be done by the following:

1. Lined earthen pit(s) shall not be used.
2. Water shall not be withdrawn from any surface impoundment(s) or stream(s).
3. Impermeable secondary containment shall be used under all staged equipment and liquid storage containers holding anything other than fresh water. Refer to the “Secondary Containment” section in Exhibit B-Engineering for specific details.
4. Surface casing is present in all of the Kinzelman wells which isolate the fresh water aquifer(s); therefore, no additional surface casing should be required. In the event surface casing is not present or is insufficient to isolate freshwater aquifer(s), set the surface casing at a minimum of 50 feet below the deepest water well, which is 115 feet deep. This shall be done per the alternative surface casing requirements in OAC 1501:9-1(M)(5) and based on the fact that the mapped USDW is deeper than the total depth (TD) of the oil well(s) being plugged.

Kyle L. Tharp

Kyle L. Tharp, Hydrogeologist
Division of Oil & Gas Resources Management
2207 Reiser Ave. SE
New Philadelphia, OH 44663
(330) 339-2207

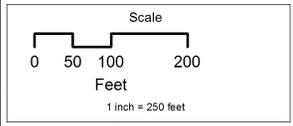
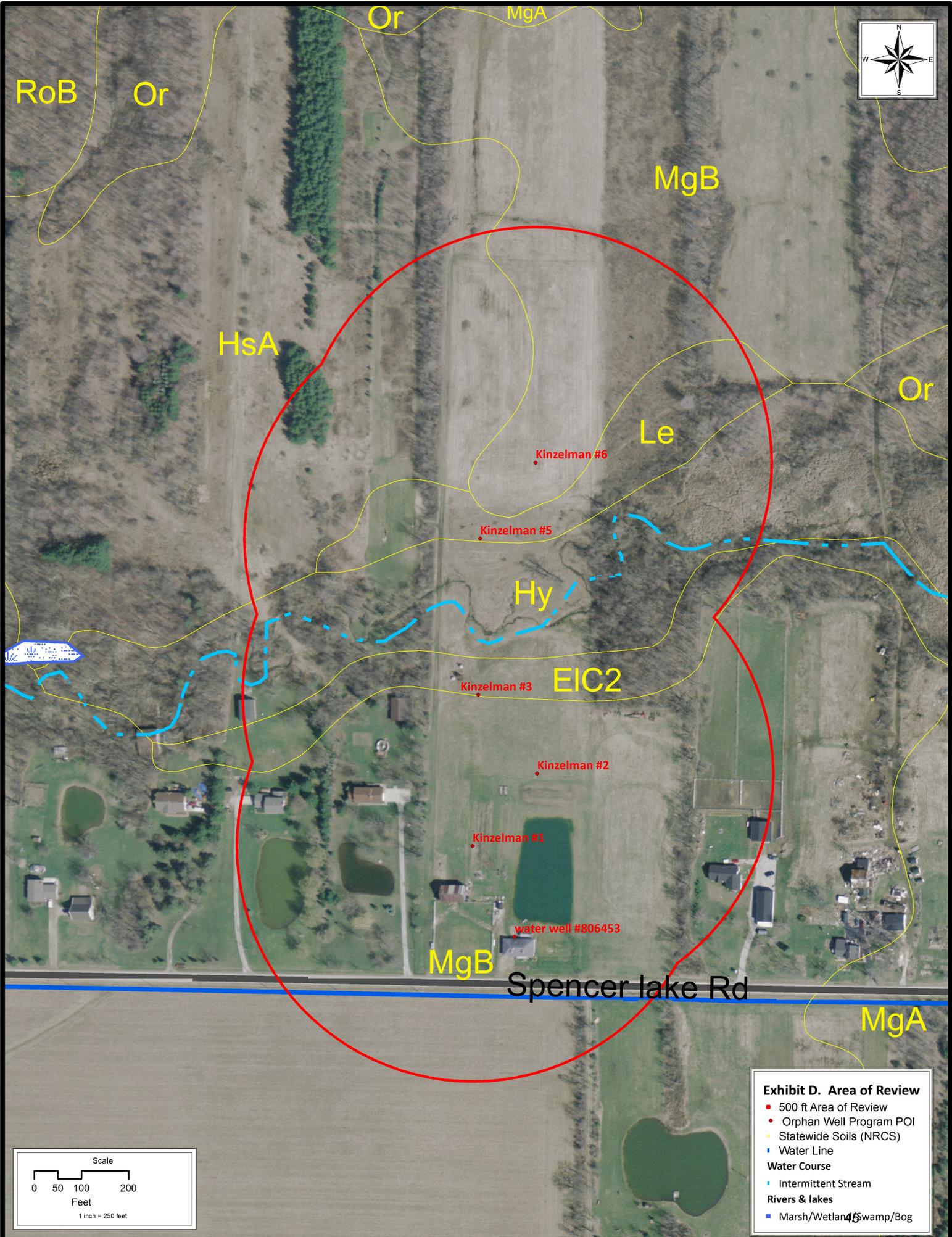


Exhibit D. Area of Review

- 500 ft Area of Review
- Orphan Well Program POI
- Statewide Soils (NRCS)
- Water Line
- Water Course**
- Intermittent Stream
- Rivers & lakes**
- Marsh/Wetland/Swamp/Bog

TYPE OR USE PEN
SELF TRANSCRIBING
PRESS HARD

WELL LOG AND DRILLING REPORT

Ohio Department of Natural Resources
Division of Water, 1939 Fountain Square Drive
Columbus, Ohio 43224 Phone (614) 265-6739

806453

Permit Number 178963

COUNTY Meigs TOWNSHIP Chatham SECTION/LOT No. _____
(Circle One)

OWNER/BUILDER Dennis Knielma PROPERTY ADDRESS 9839 Spruce Lake Rd
(Circle One or Both) First Last (Address of well location) Number Street City

LOCATION OF PROPERTY _____ Zip Code + 4 _____

CONSTRUCTION DETAILS

CASING *(Length below grade) Borehole Diameter _____ in.

Diameter 3 in. Length* 42 ft. Wall Thickness 2.81 in. Material _____ Volume used _____

Diameter _____ in. Length* _____ ft. Wall Thickness _____ in. Method of installation _____

Type: Steel Galv. PVC Other _____

Joints: Threaded Welded Solvent Other _____

Liner: Length _____ Type _____ Wall Thickness _____ in. Depth: placed from _____ ft. to _____ ft.

SCREEN

Type (wire wrapped, louvered, etc.) _____ Material _____

Length _____ ft. Diameter _____ in. Rotary Cable Augered Driven Dug Other _____

Set between _____ ft. and _____ ft. Slot _____

GROUT

Method of installation _____

Depth: placed from _____ ft. to _____ ft.

GRAVEL PACK (Filter Pack)

Material _____ Volume used _____

Method of installation _____

Depth: placed from _____ ft. to _____ ft.

Pigless Device Adapter Preassembled unit

Use of Well Home

Date of Completion 10-19-95

WELL LOG*

INDICATE DEPTH(S) AT WHICH WATER IS ENCOUNTERED.

Show color, texture, hardness, and formation:
sandstone, shale, limestone, gravel, clay, sand, etc.

	From	To
Top soil	0'	1'
Brown clay	1'	12'
Gray Clay & sand	12'	25'
sand & gravel	25'	32'
Shale	32'	115'
1 st water	44'	

WELL TEST

Bailing Pumping* Other _____

Test rate 2 1/2 gpm Duration of test 2 hrs.

Drawdown _____ ft.

Measured from: top of casing ground level Other _____

Static Level (depth to water) 14 ft. Date: 10-8-95

Quality (clear, cloudy, taste, odor) _____

PUMP

Type of pump Submersible Capacity 5 gpm

Pump set at 105 ft.

Pump installed by Frost Drilling Co

WELL LOCATION

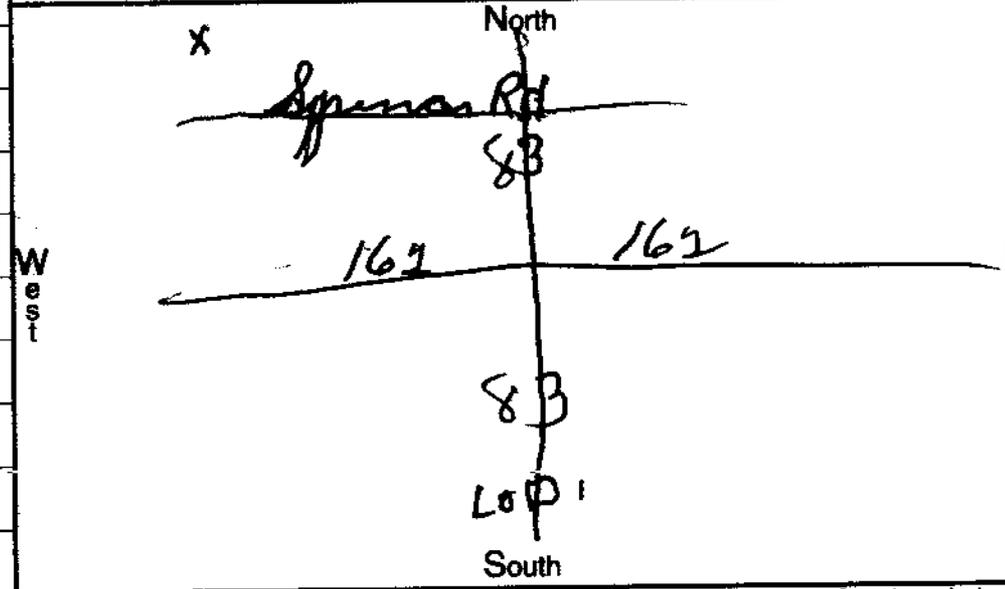
Location of well in State Plane coordinates, if available:

Zone _____ x _____ y _____

Elevation of well _____ ft./m. Datum plain: NAD27 NAD83

Source of coordinates: GPS Survey Other _____

Sketch a map showing distance well lies from numbered state highways, street intersections, county roads, buildings or other notable landmarks.



(If additional space is needed to complete well log, use next consecutively numbered form.) I hereby certify the information given is accurate and correct to the best of my knowledge.

Drilling Firm Frost Drilling Co Signed George Frost

Address 2522 W Sterling Rd Date 10-28-95

City, State, Zip Burbank, Ohio 44214 ODH Registration Number 2083



EXHIBIT E

Environmental Site Assessment

Orphan Well Plugging of the:
Kinzelman D&K #1 (34-103-24278-0000)
Kinzelman D&K #2 (34-103-24277-0000)
Kinzelman D&K #3 (34-103-24276-0000)
Kinzelman D&K #5 (34-103-24275-0000)
Kinzelman D&K #6 (34-103-24274-0000)
Medina County, Chatham Township, OH

1.0 Site Information

1.1 Site Summary

Tank Battery GPS: 41.1145933°, -82.0443496°

Access GPS: 41.1128618°, -82.0445934°

Directions: Access is located on the north side of Spencer Lake Road approximately 0.70 miles east of Richman Rd.

Access Road Length: 1221 feet

Access Road Width: 15 feet

Wellhead Work Area: 150 feet (maximum)

Area of Disturbance: 4.88 acres

Area of Review Radius: 300 feet

Area of Review Size: 32.93 acres

Site Visit Conducted on: 8/25/16

1.2 Kinzelman D&K #1 (34-103-24278-0000)

Wellhead GPS: 41.1135822°, -82.0442450°

Access Length: 811 feet

Work Area: 1.27 acres

1.3 Kinzelman D&K #2 (34-103-24277-0000)

Wellhead GPS: 41.1140047°, -82.0437605°

Access Length: 781 feet

Work Area: 0.82 acres

1.4 Kinzelman D&K #3 (34-103-24276-0000)

Wellhead GPS: 41.1144614°, -82.0441975°

Access Length: 678 feet

Work Area: 0.61 acres

1.5 Kinzelman D&K #5 (34-103-24275-0000)

Wellhead GPS: 41.1153666°, -82.0441600°

Access Length: 1,135 feet

Work Area: 0.94 acres

1.6 Kinzelman D&K #6 (34-103-24274-0000)

Wellhead GPS: 41.1158185°, -82.0437180°

Access Length: 1,221 feet

Work Area: 0.66 acres

2.0 Site Description

The property is located in Medina County at 9839 Spencer Lake Rd., Spencer, OH 44275. The Area of Disturbance (AOD) (figure 1) is 4.88 acres and includes a 15 feet wide access road and a 150 feet maximum work-zone around each wellhead unless limited by surrounding obstacles (fence, wetlands, property boundaries, etc...). The property is owned by Dennis and Kathleen Kinzelman and is a farm. The entrance to the access road will be through the driveway on the west side of the property. The access road is approximately 1,221 feet at greatest length ending at the wellheads. The wellhead sites are in open hayfield/pasture. The Area of Review (AOR) (figure 1) is a 300 feet radius around the AOD that is reviewed for hydrological, biological, mineral, and cultural resources that could be effected by the well plugging activities. The AOR is 32.93 acres is size.

3.0 Hydrological Resources

3.1 Surface Water

3.1.1 Rivers and Streams

A review of the data available from the USGS shows that an intermittent stream (figure 2) runs through the AOD and the AOR. Two of the wells (#5 and #6) north of the stream and the #1, #2, and #3 on the south side of the stream. A gravel ford style crossing used by the landowner exists at 41.1151056°, -82.0444950°. United States Army Corps of Engineers (USACE) Buffalo District confirmed that placing matting across the stream at the gravel crossing does not constitute a fill and would not require a permit or notification. **Matting will be utilized by the plugging contractor (details in Exhibit B) for access across the stream to the two northern wells.** The plugging operations for this project are unlikely to have any effect on the stream present.

3.1.2 Bodies of Water

A review of the data available from the USGS shows three ponds within the AOR (figure 2). A site visit on 8/25/16 confirms these findings. Two of the ponds are on the western neighbor's property and one is on the landowner's property. All ponds will be avoided during the plugging operations. The plugging operations for this project are unlikely to have any effect on any bodies of water.

3.1.3 100-Year Floodplain

A review of the data available from Federal Emergency Management Agency (FEMA) shows that the AOR is not within any flood management zones including the 100-Year floodplain. The plugging operations for this project are not located within the boundary of a 100-Year floodplain.

3.1.4 Lake Erie Coast Management Zones

The Lake Erie Coastal Management Zone is not in Medina County.

3.1.5 State and/or Federal Scenic Rivers

A review of the data available from the ODNR Division of Watercraft shows no state and/or federal scenic rivers within the AOR. A site visit on 8/25/16 confirms these findings. The plugging operations for this project are unlikely to have any effect on any state and/or federal scenic rivers.

3.1.6 Wetlands

A review of the data available from the USFWS shows the previously mentioned ponds as wetlands within AOR. As stated above, all bodies of water will be avoided.

Soil – An additional review of soil data available from the NRCS shows five soil types within the AOR (figure 5). The soil types in the AOR are:

1. Ellsworth Silt Loam – EIC2 (288339); 6 to 12 percent slopes, eroded.
2. Haskins Loam – HsA (288352); 0 to 2 percent slopes.
3. Holly Silt Loam – Hy (288354) – Hydric (95%), floodplains.
4. Lobdell Silt Loam – Le (288367); Hydric (5%).
5. Mahoning Silt Loam – MgB (288367); 2 to 6 percent slopes. Hydric (5%)

The NRCS lists any soil as hydric if a portion of the soil matrix has hydric indicators. The hydric rating of two of the five soil types present in the AOR is 5, which means of the entire map, only 5% of the map units involved will have hydric characteristics. The Holly Silt Loam (HsA) has a hydric rating of 95% and is soil of the floodplain of the stream that splits AOD. Impacts to this area are avoided by utilizing the stream crossing that exists on the western portion of the property along with matting that will be provided by the contractor. All well locations and AOD's are on upland elevations and will avoid the floodplain area of the stream. A site visit on 8/25/16 confirmed the area surrounding the stream should be avoided.

Vegetation – A site visit on 8/25/16 confirmed the presence of hydrophytic vegetation was present along the stream. All stream floodplain zones will be avoided except for the existing gravel crossing, which will be traversed with wooden matting.

Hydrology – A site visit on 8/25/16 confirmed the presence of flowing water in the stream. All stream floodplain zones will be avoided except for the gravel crossing, **which will be traversed with wooden matting (details in Exhibit B)**. The middle portion surrounding the streams is a riparian wetland (classification not assigned) and will be avoided. Wetland boundaries will be marked and contractors will be instructed not to enter these areas. The contractor will be required to adhere to any and all access restrictions. The plugging operations for this project are unlikely to have any effect on any wetlands.

4.0 Biological Resources

4.1 Federally Threatened and Endangered Species – United States Fish and Wildlife Service (USFWS) database lists two species of threatened or endangered species in Medina County (USFWS accessed 8/31/16 7:31 AM).

4.1.1 Indiana Bat (*Myotis sodalis*)(E)

The Indiana bat hibernates during the winter in caves and mines. In the summer, the Indiana bat forages in upland forests and small stream corridors with well-developed riparian woods. Trees 5 inch Diameter Breast Height (DBH) or greater with exfoliating bark are used for maternity colonies and roosting. During the site visit on 8/25/2016, no Indiana Bats were observed and no suitable hibernating or roosting habitat was found in the project area. The plugging operations for this project will have no effect on the Indiana Bat.

4.1.2 Northern Long-Eared Bat (*Myotis septentrionalis*) (T)

The Northern Long-Eared Bat hibernates during the winter in caves and mines. In the summer, the Northern Long-Eared Bat forages in upland forests. Trees 3 inch DBH or greater with exfoliating bark are used for maternity colonies and roosting. During the site visit on 8/25/2016, no Northern Long-Eared Bats were observed

and no suitable hibernating or roosting habit was found in the project area. The plugging operations for this project will have no effect on the Northern Long-Eared Bat.

4.1.3 Bald Eagle (*Haliaeetus leucocephalus*)

The Bald Eagle is found along coasts, lakes and rivers and eat fish, birds, and carrion. The Bald Eagle builds massive platform nests in trees or on ledges. During the site visit on 8/25/2016, no Bald Eagles were observed and no suitable Bald Eagle habit was found in the project area. The plugging operations for this project will have no effect on the Bald Eagle.

5.0 Mineral Resources

5.1 Oil and Gas Wells

A review of the ODNR Division of Oil and Gas Resources Management data shows one known plugged well within the AOR but no known wells within the AOD. A tank battery is located approximately 56 feet from the Kinzelman D&K #3 and will be avoided during plugging. The plugging operations for this project are unlikely to have any effect on any surrounding oil and gas wells.

5.2 Mines

A review of the ODNR Division of Mineral Resources Management data show no known above or below ground mining operations within the area of review. The plugging operations for this project are unlikely to have any effect on any known mining operations.

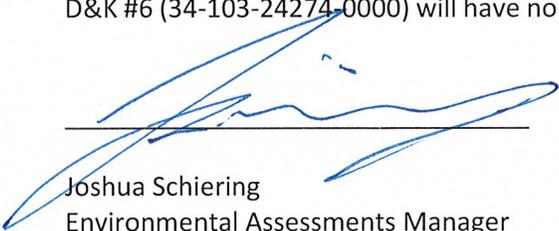
6.0 Cultural Resources

6.1 Cultural Points or Districts

A review of the national register list of historical points and districts indicates that no cultural points are located within the AOR and that the AOR does not reside within any historical district. The plugging operations for this project are unlikely to have any effect on any cultural resources.

Determination

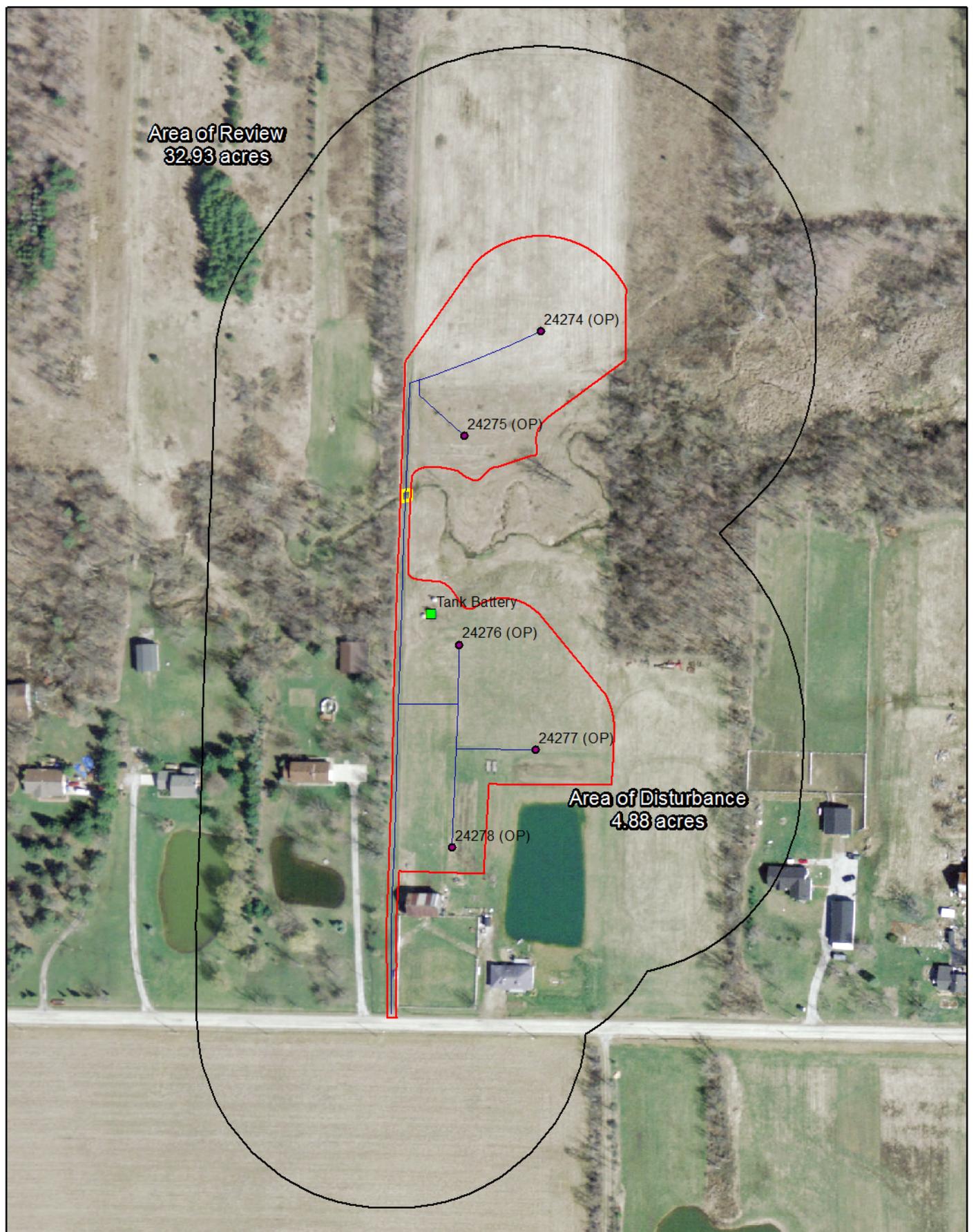
A stream crossing was identified in the review and the specifications for the stream crossing are in Exhibit B – Engineering. A review of the available data for hydrological, biological, mineral, and cultural resources together with a site evaluation performed on 8/25/16, I have determined that the activities related to the plugging of the Kinzelman D&K #1 (34-103-24278-0000), the Kinzelman D&K #2 (34-103-24277-0000), the Kinzelman D&K #3 (34-103-24276-0000), the Kinzelman D&K #5 (34-103-24275-0000), and the Kinzelman D&K #6 (34-103-24274-0000) will have no negative impacts on the surrounding environmental resources.



Date: 12/28/16

Joshua Schiering
Environmental Assessments Manager
Ohio Department of Natural Resources
Division of Oil and Gas Resources Management
2207 Reiser Ave S.E.
New Philadelphia, OH 44663
(330) 308-0007

Figure 1 Area of Disturbance and Area of Review

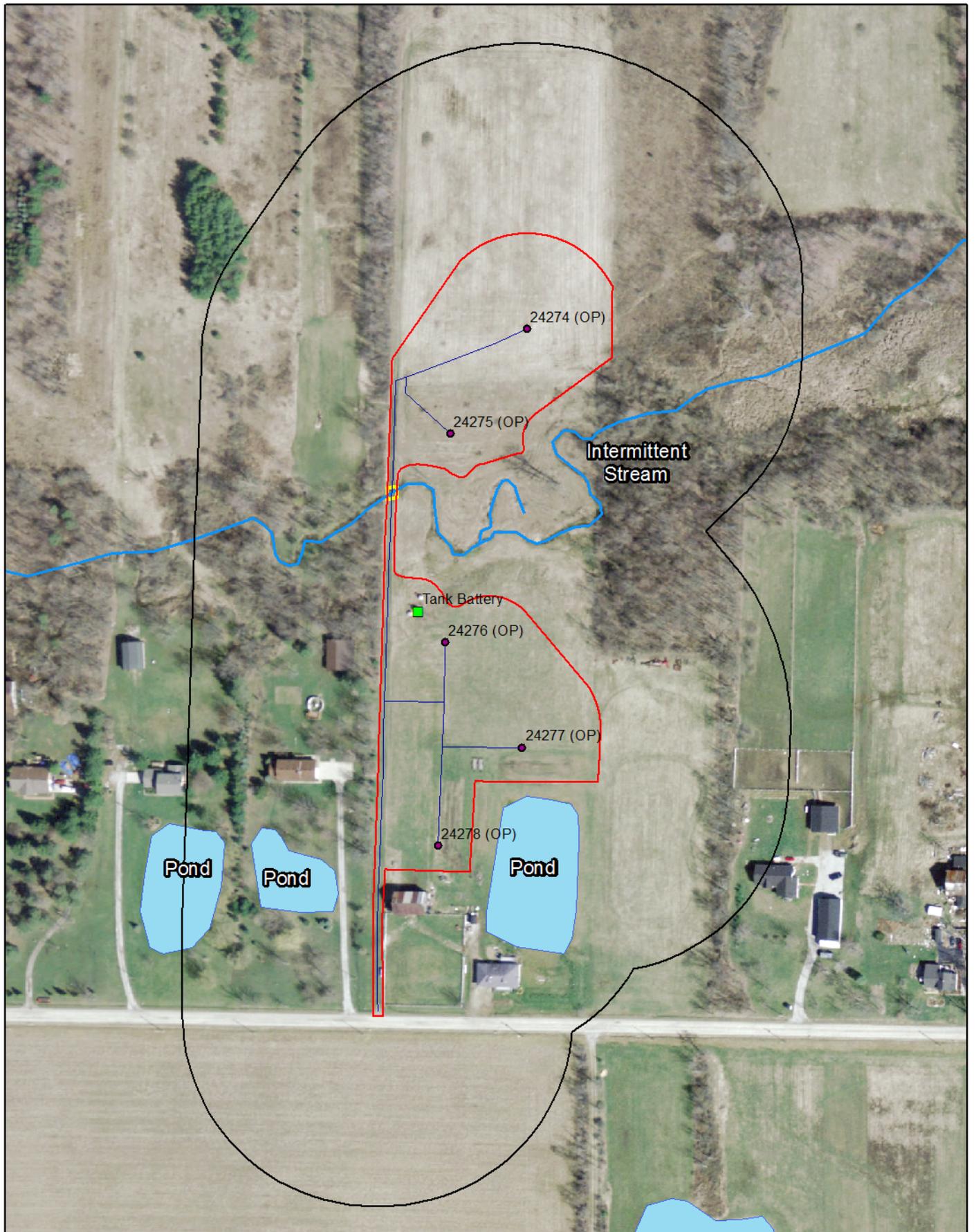


0 115 230 460 Feet



Kinzelman Property
Medina County, OH

Figure 2 Bodies of Water



0 115 230 460 Feet



Kinzelman Property
Medina County, OH

Figure 3 Stream Crossing

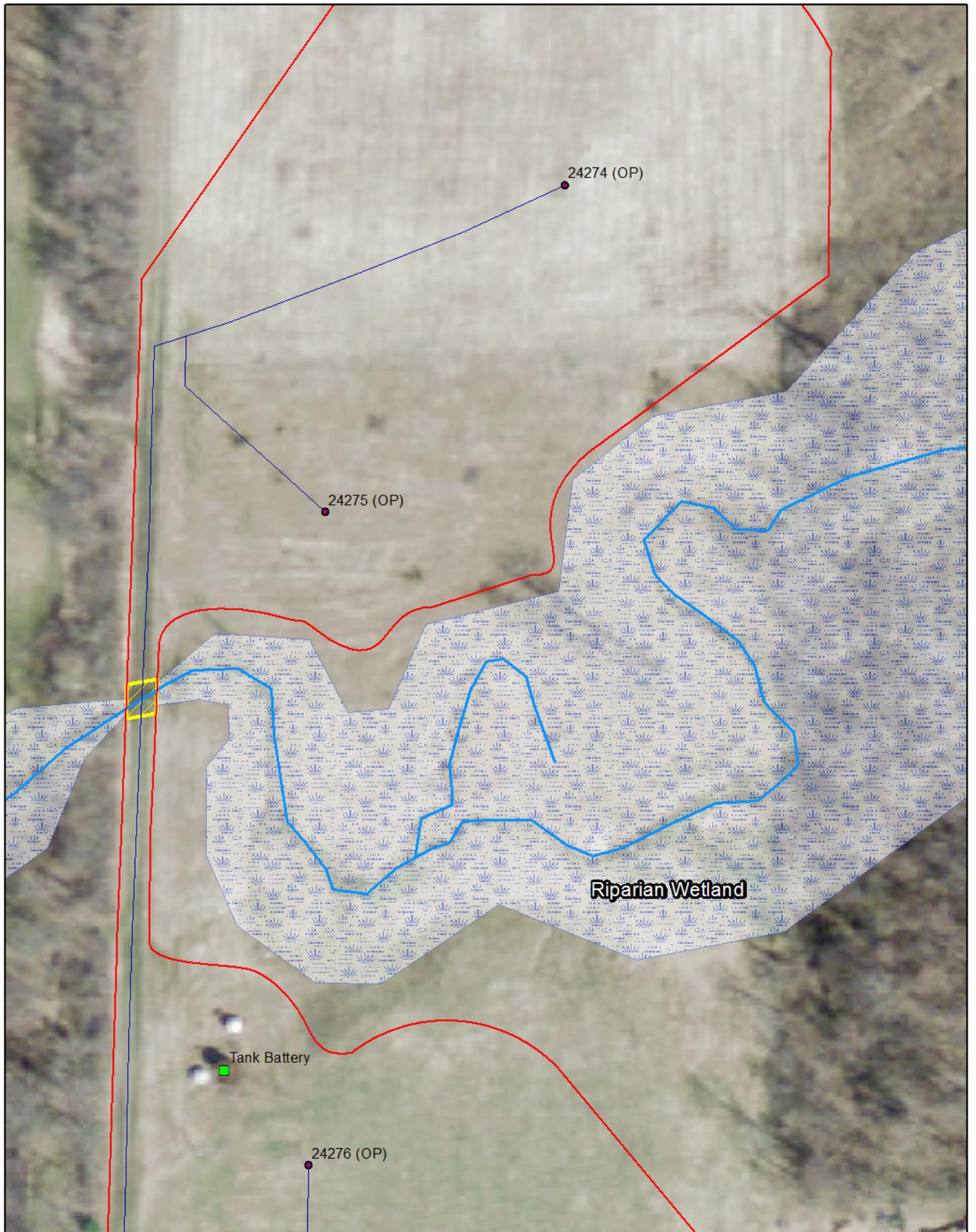


0 15 30 60 Feet



Kinzelman Property
Medina County, OH

Figure 4 Riparian Wetland (Avoid)



0 37.5 75 150 Feet



Kinzelman Property
Medina County, OH



Richard J. Simmers, Chief

Division of Oil and Gas Resources Management

2045 Morse Road, Bldg. F2

Columbus, OH 43229-6693

Phone: (614) 265-6922

Fax: (614) 265-6910

December 15, 2016

EXHIBIT F

Safety

On Monday, December 12, 2016, the wells listed below were reviewed for safety concerns and issues. The review showed no additional safety requirements to the General Scope of Work. Therefore:

- The Contractor is to follow all requirements under General Scope of Work Parts 2, 6 and 8 as written.
- The Contractor will also follow rules established by OSHA Basic Construction Safety 29 CFR 1926.

<u>Well Name</u>	<u>Permit No.</u>
Kinzelman #1	34-103-2-4278
Kinzelman #2	34-103-2-4277
Kinzelman #3	34-103-2-4276
Kinzelman #5	34-103-2-4275
Kinzelman #6	34-103-2-4274

Scott King

Emergency Operations and Response Manager

[2045 Morse Rd-Building F3](#)

[Columbus, Ohio 43229](#)

Phone: [614-265-6671](tel:614-265-6671)

Scott.King@dnr.state.oh.us

ODNR, Division of Oil & Gas Resources Management
Idle & Orphan Well Program

Contractors Bid Tabulation Form

Project Name:	Medina #1 OAG 001-17
Number of Wells:	5
Project Location(s) (County):	Medina
Project Location(s) (Township):	Chatham

Well Name	Well Number	Permit Number	Total Encumbrance
Kinzelman D&K	1	34-103-2-4278-00-00	
Kinzelman D&K	2	34-103-2-4277-00-00	
Kinzelman D&K	3	34-103-2-4276-00-00	
Kinzelman D&K	5	34-103-2-4275-00-00	
Kinzelman D&K	6	34-103-2-4274-00-00	
		Project Total	

Bid Sheet
Medina County, Chatham Township
Well Name: Kinzelman #1

Permit Number: 34-103-2-4278-0000

TD = 358' - Berea

Line Number	Description	Unit Price	Quantity	Unit	Item Total
1	Mobilization		1	service	\$ -
2	Administrative Services		1	service	\$ -
3	Protective Fencing and Barriers		1	service	\$ -
4	Silt Fence and Installation		80	feet*	\$ -
5	Site Construction		1	wellsite	\$ -
6	Tubing Racks, Liner and Berm		1	service	\$ -
7	Well Preparation		1	wellsite	\$ -
8	Diverter		1	each	\$ -
9	Rig time		40	hours	\$ -
10	Open Top Steel Tank		1	each*	\$ -
11	Frac tank		1	each*	\$ -
12	Logging (GR/Bond/CCL)		1	service	\$ -
13	Well Control Fluid		75	bbl	\$ -
14	Water truck		16	hrs	\$ -
15	Fluid disposal		100	bbl	\$ -
16	UIC#: _____				
17	9 Sack Grout		9	yard	\$ -
18	Contaminated Soil Storage		1	service	\$ -
19	Contaminated Soil Disposal		15	ton	\$ -
20	Disposal Facility: _____				
21	Contaminated Soil Analysis		1	service	\$ -
22	Decommission Tank and Vault		1	service	\$ -
23	Welder		4	hours	\$ -
23	Restoration		1	wellsite	\$ -
24	Portajohn		1	service	\$ -
25	Sorbent Pads & Booms		1	wellsite	\$ -
Total Encumbrance:					\$ -
 <u>Additional/Contingency Services</u>					
26	Road Mats (Wood/Synthetic)			sq. ft.*	
27	Steel Road Plates			sq. ft.*	
28	Downhole Camera			service	
29	Logging (Shoot Casing/Tubing)			service	
30	Cost/Shot			each	
31	Day Rate - Milling			hour	
32	Tubing Rental (2")			feet	
33	Trucking - Tubing, Collars, Bits			hours	
34	Tongs - (2"-4.5")			service	
35	Cement (Class A)			sack	
36	Cement Mixing/Pumping Charge			service	
37	Additional Labor			hour	
38	Supervisor			hour	

39	Mills	_____	each
40	Drill Bits	_____	each
41	Collar/Sub Rental	_____	each
42	Day Rate - Fishing	_____	hour
43	Fishing Tool Rental	_____	each
44	Coiled Tubing Unit	_____	service
45	Rig Standby Time	_____	hour
46	Skid Loader	_____	hour
47	Trucking - Skid Loader	_____	hour
48	Excavator	_____	hour
49	Trucking - Excavator	_____	hour
50	Road Maintenance	_____	hour
	* (inc. delivery/setup/removal)		

Note: Bidder shall complete the unit price and quantity for each bid item listed above. The item total shall be the unit price multiplied by the quantity. Bidders shall complete all items in the above bid schedule; failure to do so may be cause for rejection of bid.

The undersigned, having attended the pre-bid meeting and required site visit, and having inspected the basic project specifications and contract documents, hereby proposes to furnish all labor, equipment, tools, and transportation necessary to perform the proposed work in accordance with the listed prices.

Proposals shall be sealed & returned to the Department of Natural Resources, Division of Oil & Gas Resources Management, Attention: Jayma Umbstaetter, 2045 Morse Rd, Building F-3, Columbus, OH 43229, until _____ time am/pm on Month Date, year.

The performance period for this basic contract shall be for a period of one (1) year from the effective date of the contract. The work embodied in this proposal shall be completed in accordance with the schedule contained in each specific work directive.

The bidder shall furnish a bond in the amount of 10% of the project total, evidence of current Worker's Compensation Certificate and Certificate of Liability Insurance on Acord required form in the following minimum amounts:

Personal Injury:	_____	Limit Minimum	_____
Property Damage:	_____	Limit Minimum	_____

Submitted by

Name of Contractor:		
Date:		
Signature:		
Address:		
City:	State:	Zip Code:
Telephone:		
Federal Tax Identification #:		

Bid Sheet
Medina County, Chatham Township
Well Name: Kinzelman #2

Permit Number: 34-103-2-4277-0000

TD = 358' - Berea

Line Number	Description	Unit Price	Quantity	Unit	Item Total
1	Administrative Services	_____	1	service	\$ -
2	Protective Fencing and Barriers	_____	1	service	\$ -
3	Silt Fence and Installation	_____	80	feet*	\$ -
4	Tubing Racks, Liner and Berm	_____	1	service	\$ -
6	Site Construction	_____	1	service	\$ -
7	Well Preparation	_____	1	service	\$ -
8	Diverter	_____	1	each	\$ -
9	Rig time	_____	40	hours	\$ -
10	Open Top Steel Tank	_____	1	each*	\$ -
11	Frac tank	_____	1	each*	\$ -
12	Logging (GR/Bond/CCL)	_____	1	service	\$ -
13	Well Control Fluid	_____	75	bbl	\$ -
14	Water truck	_____	16	hrs	\$ -
15	Fluid disposal	_____	100	bbl	\$ -
16	UIC#: _____				
17	9 Sack Grout	_____	9	yard	\$ -
18	Contaminated Soil Storage	_____	1	service	\$ -
19	Contaminated Soil Disposal	_____	5	ton	\$ -
20	Disposal Facility: _____				
21	Contaminated Soil Analysis	_____	1	service	\$ -
22	Welder	_____	4	hours	\$ -
23	Restoration	_____	1	wellsite	\$ -
24	Portajohn	_____	1	service	\$ -
	Total Encumbrance:				\$ -
	* (inc. delivery/setup/removal)				
	<u>Additional/Contingency Services</u>				
25	Road Mats (Wood/Synthetic)	_____		sq. ft.*	
26	Steel Road Plates	_____		sq. ft.*	
27	Sorbent Pads & Booms	_____		wellsite	
28	Downhole Camera	_____		service	
29	Logging (Shoot Casing)	_____		service	
30	Cost/Shot	_____		each	
31	Day Rate - Milling	_____		hour	
32	Tubing Rental (2")	_____		feet	
33	Trucking - Tubing, Collars, Bits	_____		hour	
34	Tongs - (2"-4.5")	_____		service	
35	Cement (Class A)	_____		sacks	
36	Cement Mixing/Pumping Charge	_____		service	
37	Additional Labor	_____		hour	
38	Supervisor	_____		hour	

39	Mills	_____	each
40	Drill Bits	_____	each
41	Collar/Sub Rental	_____	each
42	Day Rate - Fishing	_____	hour
43	Fishing Tool Rental	_____	each
44	Coiled Tubing Unit	_____	service
45	Rig Standby Time	_____	hour
46	Skid Loader	_____	hour
47	Trucking - Skid Loader	_____	hour
48	Excavator	_____	hour
49	Trucking - Excavator	_____	hour
50	Road Maintenance	_____	hour

The undersigned, having attended the pre-bid meeting and required site visit, and having inspected the basic project specifications and contract documents, hereby proposes to furnish all labor, equipment, tools, and transportation necessary to perform the proposed work in accordance with the listed prices.

Proposals shall be sealed & returned to the Department of Natural Resources, Division of Oil & Gas Resources Management, Attention: Jayma Umbstaetter, 2045 Morse Rd, Building F-3, Columbus, OH 43229, until _____ time am/pm on Month Date, year.

The performance period for this basic contract shall be for a period of one (1) year from the effective date of the contract. The work embodied in this proposal shall be completed in accordance with the schedule contained in each specific work directive.

The bidder shall furnish a bond in the amount of 10% of the project total, evidence of current Worker's Compensation Certificate and Certificate of Liability Insurance on Acord required form in the following minimum amounts:

Personal Injury: _____ Limit Minimum _____

Property Damage: _____ Limit Minimum _____

Submitted by

Company:		
Date:		
Signature:		
Address:		
City:	State:	Zip Code:
Telephone:		
Federal Tax Identification #:		

Bid Sheet
Medina County, Chatham Township
Well Name: Kinzelman #3

Permit Number: 34-103-2-4276-0000

TD = 347' - Berea

Line Number	Description	Unit Price	Quantity	Unit	Item Total
1	Administrative Services	_____	1	service	\$ -
2	Steel Road Plates (Utility Crossing)	_____	96	sq. ft.*	\$ -
3	Protective Fencing and Barriers	_____	1	service	\$ -
4	Silt Fence and Installation	_____	80	feet*	\$ -
5	Site Construction	_____	1	wellsite	\$ -
6	Well Preparation	_____	1	wellsite	\$ -
7	Diverter	_____	1	each	\$ -
8	Rig time	_____	40	hours	\$ -
9	Open Top Steel Tank	_____	1	each*	\$ -
10	Frac tank	_____	1	each*	\$ -
11	Logging (GR/Bond/CCL)	_____	1	service	\$ -
12	Well Control Fluid	_____	75	bbl	\$ -
13	Water truck	_____	16	hrs	\$ -
14	Fluid disposal	_____	100	bbl	\$ -
15	UIC#: _____				
16	9 Sack Grout	_____	9	yard	\$ -
17	Contaminated Soil Storage	_____	1	service	\$ -
18	Contaminated Soil Disposal	_____	5	ton	\$ -
19	Disposal Facility: _____				
20	Contaminated Soil Analysis	_____	1	service	\$ -
21	Welder	_____	4	hours	\$ -
22	Restoration	_____	1	wellsite	\$ -
23	Portajohn	_____	1	service	\$ -
	Total Encumbrance:				\$ -
	* (inc. delivery/setup/removal)				
	<u>Additional/Contingency Services</u>				
24	Sorbent Pads & Booms	_____		wellsite	
25	Downhole Camera	_____		service	
26	Logging (Shoot Casing)	_____		service	
27	Cost/Shot	_____		each	
28	Day Rate - Milling	_____		hour	
29	Tubing Rental (2")	_____		feet	
30	Trucking - Tubing, Collars, Bits	_____		hour	
31	Tongs - (2"-4.5")	_____		service	
32	Cement (Class A)	_____		sack	
33	Cement Mixing/Pumping Charge	_____		service	
34	Additional Labor	_____		hour	
35	Supervisor	_____		hour	
36	Mills	_____		each	
37	Drill Bits	_____		each	
38	Collar/Sub Rental	_____		each	

39	Day Rate - Fishing	_____	hour
40	Fishing Tool Rental	_____	each
41	Coiled Tubing Unit	_____	service
42	Rig Standby Time	_____	hour
43	Skid Loader	_____	hour
44	Trucking - Skid Loader	_____	hour
45	Excavator	_____	hour
46	Trucking - Excavator	_____	hour
47	Road Maintenance	_____	hour

The undersigned, having attended the pre-bid meeting and required site visit, and having inspected the basic project specifications and contract documents, hereby proposes to furnish all labor, equipment, tools, and transportation necessary to perform the proposed work in accordance with the listed prices.

Proposals shall be sealed & returned to the Department of Natural Resources, Division of Oil & Gas Resources Management, Attention: Jayma Umbstaetter, 2045 Morse Rd, Building F-3, Columbus, OH 43229, until _____ time am/pm on Month Date, year.

The performance period for this basic contract shall be for a period of one (1) year from the effective date of the contract. The work embodied in this proposal shall be completed in accordance with the schedule contained in each specific work directive.

The bidder shall furnish a bond in the amount of 10% of the project total, evidence of current Worker's Compensation Certificate and Certificate of Liability Insurance on Acord required form in the following minimum amounts:

Personal Injury: _____ Limit Minimum _____
Property Damage: _____ Limit Minimum _____

Submitted by

Company:		
Date:		
Signature:		
Address:		
City:	State:	Zip Code:
Telephone:		
Federal Tax Identification #:		

Bid Sheet
Medina County, Chatham Township
Well Name: Kinzelman #5

Permit Number: 34-103-2-4275-0000

TD = 347' - Berea

Line Number	Description	Unit Price	Quantity	Unit	Item Total
1	Administrative Services	_____	1	service	\$ -
2	Road Mats (Stream Crossing)	_____	288	sq. ft.*	\$ -
3	Protective Fencing and Barriers	_____	1	service	\$ -
4	Silt Fence and Installation	_____	80	feet*	\$ -
5	Site Construction	_____	1	wellsite	\$ -
6	Well Preparation	_____	1	wellsite	\$ -
7	Diverter	_____	1	each	\$ -
8	Rig time	_____	40	hours	\$ -
9	Open Top Steel Tank	_____	1	each	\$ -
10	Frac tank	_____	1	each	\$ -
11	Logging (GR/Bond/CCL)	_____	1	service	\$ -
12	Well Control Fluid	_____	75	bbl	\$ -
13	Water truck	_____	16	hrs	\$ -
14	Fluid disposal	_____	100	bbl	\$ -
15	UIC#: _____				
16	9 Sack Grout	_____	9	yard	\$ -
17	Contaminated Soil Storage	_____	1	service	\$ -
18	Contaminated Soil Disposal	_____	5	ton	\$ -
19	Disposal Facility: _____				
20	Contaminated Soil Analysis	_____	1	service	\$ -
21	Welder	_____	4	hours	\$ -
22	Restoration	_____	1	wellsite	\$ -
23	Portajohn	_____	1	service	\$ -
	Total Encumbrance:				\$ -
	* (inc. delivery/setup/removal)				
	<u>Additional/Contingency Services</u>				
24	Sorbent Pads & Booms	_____		wellsite	
25	Downhole Camera	_____		service	
26	Logging (Shoot Casing)	_____		service	
27	Cost/Shot	_____		each	
28	Day Rate - Milling	_____		hour	
29	Tubing Rental (2")	_____		feet	
30	Trucking - Tubing, Collars, Bits	_____		hours	
31	Tongs - (2"-4.5")	_____		service	
32	Cement (Class A)	_____		sack	
33	Cement Mixing/Pumping Charge	_____		service	
34	Additional Labor	_____		hour	
35	Supervisor	_____		hour	
36	Mills	_____		each	
37	Drill Bits	_____		each	
38	Collar/Sub Rental	_____		each	

39	Day Rate - Fishing	_____	hour
40	Fishing Tool Rental	_____	each
41	Coiled Tubing Unit	_____	service
42	Rig Standby Time	_____	hour
43	Skid Loader	_____	hour
44	Trucking - Skid Loader	_____	hour
45	Excavator	_____	hour
46	Trucking - Excavator	_____	hour
47	Road Maintenance	_____	hour

The undersigned, having attended the pre-bid meeting and required site visit, and having inspected the basic project specifications and contract documents, hereby proposes to furnish all labor, equipment, tools, and transportation necessary to perform the proposed work in accordance with the listed prices.

Proposals shall be sealed & returned to the Department of Natural Resources, Division of Oil & Gas Resources Management, Attention: Jayma Umbstaetter, 2045 Morse Rd, Building F-3, Columbus, OH 43229, until _____ time am/pm on Month Date, year.

The performance period for this basic contract shall be for a period of one (1) year from the effective date of the contract. The work embodied in this proposal shall be completed in accordance with the schedule contained in each specific work directive.

The bidder shall furnish a bond in the amount of 10% of the project total, evidence of current Worker's Compensation Certificate and Certificate of Liability Insurance on Acord required form in the following minimum amounts:

Personal Injury: _____ Limit Minimum _____
 Property Damage: _____ Limit Minimum _____

Submitted by

Name of Contractor: DOGRM		
Date: 11/29/16		
Signature: Chini		
Address:		
City:	State:	Zip Code:
Telephone:		
Federal Tax Identification #:		

Bid Sheet
Medina County, Chatham Township
Well Name: Kinzelman #6

Permit Number: 34-103-2-4274-0000

TD = 477' - Berea

Line Number	Description	Unit Price	Quantity	Unit	Item Total
1	Demobilization	_____	1	service	\$ -
2	Administrative Services	_____	1	service	\$ -
3	Protective Fencing and Barriers	_____	1	service	\$ -
4	Silt Fence and Installation	_____	80	feet*	\$ -
5	Site Construction	_____	1	wellsite	\$ -
6	Well Preparation	_____	1	wellsite	\$ -
7	Diverter	_____	1	each	\$ -
8	Rig time	_____	40	hours	\$ -
9	Open Top Steel Tank	_____	1	each*	\$ -
10	Frac tank	_____	1	each*	\$ -
11	Logging (GR/Bond/CCL)	_____	1	service	\$ -
12	Well Control Fluid	_____	75	bbl	\$ -
13	Water truck	_____	16	hrs	\$ -
14	Fluid disposal	_____	100	bbl	\$ -
15	UIC#: _____				
16	9 Sack Grout	_____	9	yard	\$ -
17	Contaminated Soil Storage	_____	1	service	\$ -
18	Contaminated Soil Disposal	_____	5	ton	\$ -
19	Disposal Facility: _____				
20	Contaminated Soil Analysis	_____	1	service	\$ -
21	Welder	_____	4	hours	\$ -
22	Restoration	_____	1	wellsite	\$ -
23	Portajohn	_____	1	service	\$ -
Total Encumbrance:					\$ -
 <u>Additional/Contingency Services</u>					
24	Sorbent Pads & Booms	_____		wellsite	
25	Road Mats (Wood/Synthetic)	_____		sq. ft.*	
26	Steel Road Plates	_____		sq. ft.*	
27	Downhole Camera	_____		service	
28	Logging (Shoot Casing)	_____		service	
29	Cost/Shot	_____		each	
30	Day Rate - Milling	_____		hour	
31	Tubing Rental (2")	_____		feet	
32	Trucking - Tubing, Collars, Bits	_____		hour	
33	Tongs - (2"-4.5")	_____		service	
34	Cement (Class A)	_____		sack	
35	Cement Mixing/Pumping Charge	_____		service	
36	Additional Labor	_____		hour	
37	Supervisor	_____		hour	
38	Mills	_____		each	
39	Drill Bits	_____		each	

40	Collar/Sub Rental	_____	each
41	Day Rate - Fishing	_____	hour
42	Fishing Tool Rental	_____	each
43	Coiled Tubing Unit	_____	service
44	Rig Standby Time	_____	hour
45	Skid Loader	_____	hour
46	Trucking - Skid Loader	_____	hour
47	Excavator	_____	hour
48	Trucking - Excavator	_____	hour
49	Road Maintenance	_____	hour
	* (inc. delivery/setup/removal)		

The undersigned, having attended the pre-bid meeting and required site visit, and having inspected the basic project specifications and contract documents, hereby proposes to furnish all labor, equipment, tools, and transportation necessary to perform the proposed work in accordance with the listed prices.

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The performance period for this basic contract shall be for a period of one (1) year from the effective date of the contract. The work embodied in this proposal shall be completed in accordance with the schedule contained in each specific work directive.

The bidder shall furnish a bond in the amount of 10% of the project total, evidence of current Worker's Compensation Certificate and Certificate of Liability Insurance on Acord required form in the following minimum amounts:

Personal Injury: _____ Limit Minimum _____
Property Damage: _____ Limit Minimum _____

Submitted by

Name of Contractor:		
Date:		
Signature:		
Address:		
City:	State:	Zip Code:
Telephone:		
Federal Tax Identification #:		