



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

February 19, 2013

WELL WORK PERMIT
Horizontal 6A Well

This permit, API Well Number: 47-8510019, issued to ANTERO RESOURCES APPALACHIAN CORPORATION, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, well operators report of well work, is to be submitted to this office within 90 days of completion of drilling, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.

James Martin
Chief

Operator's Well No: MCCABE UNIT 3H
Farm Name: ANDREW WILLIAMSON ET AL
API Well Number: 47-8510019
Permit Type: Horizontal 6A Well
Date Issued: 02/19/2013

Promoting a healthy environment.

05/31/2024

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. The Office of Oil and Gas has approved your permit application, which includes your addendum. Please be advised that the addendum is part of the terms of the well work permit, and will be enforced as such. The Office of Oil and Gas must receive a copy of all data collected, and submitted in a timely fashion, but no later than the WR35 submittal.
2. Prior to conducting hydraulic fracturing operations, identify any and all shallower producing wells within the area of review that may have multiple levels of completions (more than one producing interval open in the well bore) and communicate this to the DEP. If any wells are found that have multiple completions, evaluate the risk associated with communication into any shallow producing zone(s).
3. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
4. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the fill material shall be within plus or minus 2% (unless soil test results show a greater range of moisture content is appropriate and 95% compaction can still be achieved) of the optimum moisture content as determined by the standard proctor density test, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort. Each lift must meet 95 % compaction of the optimum density based on results from the standard proctor density test of the actual soils used in specific engineered fill sites. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
5. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
6. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
7. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.

05/31/2024

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
W.VA. CODE §22-6A - WELL WORK PERMIT APPLICATION

85 64 362

1) Well Operator: Antero Resources Appalachian Corporation 494488557 085 - Ritchie Union Pullman 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: McCabe Unit 3H Well Pad Name: Yolanda Pad

3 Elevation, current ground: 1142' Elevation, proposed post-construction: 1142'

4) Well Type: (a) Gas Oil
Other
(b) If Gas: Shallow Deep
Horizontal

5) Existing Pad? Yes or No: Yes

6) Proposed Target Formation(s), Depth(s), Anticipated Thicknesses and Associated Pressure(s):
Marcellus, 6900' TVD, Anticipated Thickness- 50', Associated Pressure -3,000#

7) Proposed Total Vertical Depth: 6900' TVD

8) Formation at Total Vertical Depth: Marcellus

9) Proposed Total Measured Depth: 14,400' MD

10) Approximate Fresh Water Strata Depths: 61', 85', 197'

11) Method to Determine Fresh Water Depth: Nicholson Unit 2H. Offset well records - depths have been adjusted according to surface elevations.

12) Approximate Saltwater Depths: 938', 1342'

13) Approximate Coal Seam Depths: 1177'

14) Approximate Depth to Possible Void (coal mine, karst, other): None anticipated

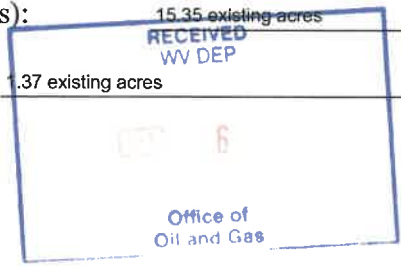
15) Does land contain coal seams tributary or adjacent to, active mine? No

16) Describe proposed well work: Drill, perforate, fracture a new horizontal shallow well and complete Marcellus Shale

17) Describe fracturing/stimulating methods in detail:
Antero plans to pump Slickwater into the Marcellus Shale formation in order to ready the well for production. The fluid will be comprised of approximately 99 percent water and sand, with less than 1 percent special-purpose additives as shown in the attached "List of Anticipated Additives Used for Fracturing or Stimulating Well."

18) Total area to be disturbed, including roads, stockpile area, pits, etc, (acres): 15.35 existing acres

19) Area to be disturbed for well pad only, less access road (acres): 1.37 existing acres



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20)

CASING AND TUBING PROGRAM

| <u>TYPE</u> | <u>Size</u> | <u>New or Used</u> | <u>Grade</u> | <u>Weight per ft.</u> | <u>FOOTAGE: For Drilling</u> | <u>INTERVALS: Left in Well</u> | <u>CEMENT: Fill-up (Cu. Ft.)</u> |
|--------------|-------------|--------------------|--------------|-----------------------|------------------------------|--------------------------------|----------------------------------|
| Conductor | 20" | New | H-40 | 94# | 40' | 40' | CTS, 38 Cu. Ft. |
| Fresh Water | 13-3/8" | New | J-55/H-40 | 54.5#/48# | 300' | 300' | CTS, 417 Cu. Ft. |
| Coal | 9-5/8" | New | J-55 | 36# | 2445' | 2445' | CTS, 996 Cu Ft. |
| Intermediate | | | | | | | |
| Production | 5-1/2" | New | P-110 | 20# | 14400' | 14400' | 3575 Cu Ft. |
| Tubing | 2-3/8" | New | N-80 | 4.7# | | 7200' | |
| Liners | | | | | | | |

| <u>TYPE</u> | <u>Size</u> | <u>Wellbore Diameter</u> | <u>Wall Thickness</u> | <u>Burst Pressure</u> | <u>Cement Type</u> | <u>Cement Yield</u> |
|--------------|-------------|--------------------------|-----------------------|-----------------------|-----------------------|---------------------|
| Conductor | 20" | 24" | 0.438" | 1530 | Class A | 1.18 |
| Fresh Water | 13-3/8" | 17-1/2" | 0.38" | 3560 | Class A | 1.18 |
| Coal | 9-5/8" | 12-1/4" | 0.352" | 3520 | Class A | 1318 |
| Intermediate | | | | | | |
| Production | 5-1/2" | 8-3/4" & 8-1/2" | 0.361" | 12630 | Lead-H/POZ & Tail - H | H/POZ-1.44 & H-1.8 |
| Tubing | 2-3/8" | 4.778" | 0.19" | 11200 | | |
| Liners | | | | | | |

PACKERS

| | | | | |
|-------------|-----|--|--|--|
| Kind: | N/A | | | |
| Sizes: | N/A | | | |
| Depths Set: | N/A | | | |

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Office of Oil & Gas

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Environmental Protection

Dudon
1-24-13

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21) Describe centralizer placement for each casing string.

Conductor: no centralizers

Surface Casing: one centralizer 10' above the float shoe, one on the insert float collar and one every 4th joint spaced up the hole to surface.

Intermediate Casing: one centralizer above float joint, one centralizer 5' above float collar and one every 4th collar to surface.

Production Casing: one centralizer at shoe joint and one every 3 joints to top of cement in intermediate casing.

22) Describe all cement additives associated with each cement type.

Conductor: no additives, Class A cement.

Surface: Class A cement with 2% calcium and 1/4 lb flake, 5 gallons of clay treat

Intermediate: Class A cement with 1/4 lb of flake, 5 gallons of clay treat

Production: Lead cement- 50/50 Class H/Poz + 1.5% salt + 1% C-45 + 0.5% C-16a + 0.2% C-12 + 0.45% C-20 + 0.05% C-51

Production: Tail cement- Class H + 45 PPS Calcium Carbonate + 1.0% FL-160 + 0.2% ACGB-47 + 0.05% ACSA-51 + 0.2% ACR-20

23) Proposed borehole conditioning procedures.

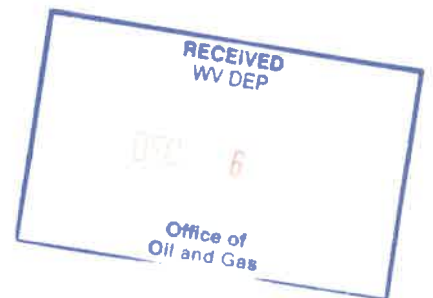
Conductor: blowhole clean with air, run casing, 10 bbls fresh water.

Surface: blowhole clean with air, trip to conductor shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate pipe capacity + 40 bbls fresh water followed by 25 bbls bentonite mud, 10 bbls fresh water spacer.

Intermediate: blowhole clean with air, trip to surface casing shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate 40 bbls brine water followed by 10 bbls fresh water and 25 bbls bentonite mud, pump 10 bbls fresh water.

Production: circulate with 14 lb/gal NaCl mud, trip to middle of lateral, circulate, pump high viscosity sweep, trip to base of curve, pump high viscosity sweep, trip to top of curve, trip to bottom, circulate, pump high viscosity sweep, trip out, run casing, circulate 10 bbls fresh water, pump 48 bbls barite pill, pump 10 bbls fresh water followed by 48 bbls mud flush and 10 bbls water.

*Note: Attach additional sheets as needed.



05/31/2024

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

**CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE**

Operator Name Antero Resources Appalachian Corporation OP Code 494488557

Watershed Little White Oak Creek Quadrangle Pullman 7.5'

Elevation 1142' County Ritchie District Union

Description of anticipated Pit Waste: Drilling and Flowback Fluids and Cuttings

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a synthetic liner be used in the pit? Yes (existing) If so, what mil.? 60 mil (existing)

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number Future permitted well locations when applicable. API# will be provided on Form WR-34)
- Off Site Disposal (Meadowfill Landfill Permit #SWF-1032-98)
- Other (Explain _____)

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. Surface - Air/Freshwater, Intermediate - Dust/Stiff Foam, Production - Water Based Mud

-If oil based, what type? Synthetic, petroleum, etc. N/A

Additives to be used? Please See Attachment

Will closed loop system be used? Yes

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Removed offsite and taken to landfill

-If left in pit and plan to solidify what medium will be used? Cement, lime, N/A

-Landfill or offsite name/permit number? Meadowfill Landfill (Permit #SWF-1032-98)

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature [Signature]

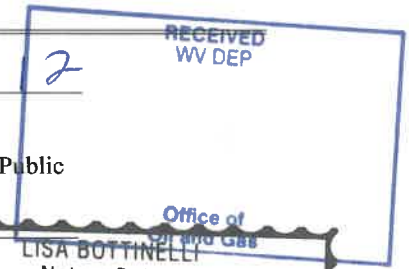
Company Official (Typed Name) Randy Kloberdanz

Company Official Title Director - Regulatory & Environmental Specialist

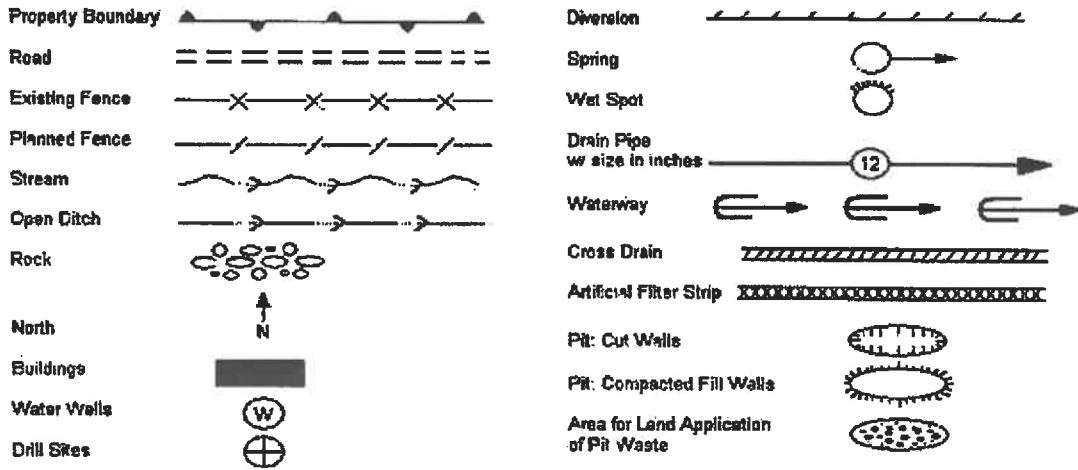
Subscribed and sworn before me this 3 day of December, 2012

Lisa Bottinelli Notary Public

My commission expires Nov 9, 2016



05/31/2024



(Existing Pad 1.37 + Existing Access Road 1.72 + Existing Frac Pit 0.90 + Existing Clearing 11.36 = 15.35 Acres)

Proposed Revegetation Treatment: Acres Disturbed 15.35 Prevegetation pH 6.0

Lime 2-3 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) 500 lbs/acre (500 lbs minimum)

Mulch 2-3 Tons/acre (Hay or straw or Wood Fiber (will be used where needed))

Seed Mixtures

| Seed Type | Area I (Temporary) lbs/acre | Seed Type | Area II (Permanent) lbs/acre |
|------------------|--------------------------------|-----------------|---------------------------------|
| Annual Rye Grass | 40 | Fox Tail/Grassy | 40 |
| | | Perennial Rye | 30 |
| | | Crown Vetch | 20 |

Attach:
Drawing(s) of road, location, pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: David W. Cowan

Comments: proceed & mulch all cut area no less than 2 tons per acre

Title: safety gas inspector

Date: 1-24-13

Field Reviewed? Yes No

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JAN 28 2013

WV Department of
Environmental Protection

05/31/2024



David W. Carr
1-24-13

Well Site Safety Plan

Antero Resources

Well Name: McCabe Unit 2H, McCabe Unit 3H, Allstate Unit 1H, Allstate Unit 2H, Nicholson Unit 1H, Nicholson Unit 2H, Nicholson Unit 3, O'Neil Unit 1H and O'Neil Unit 2H

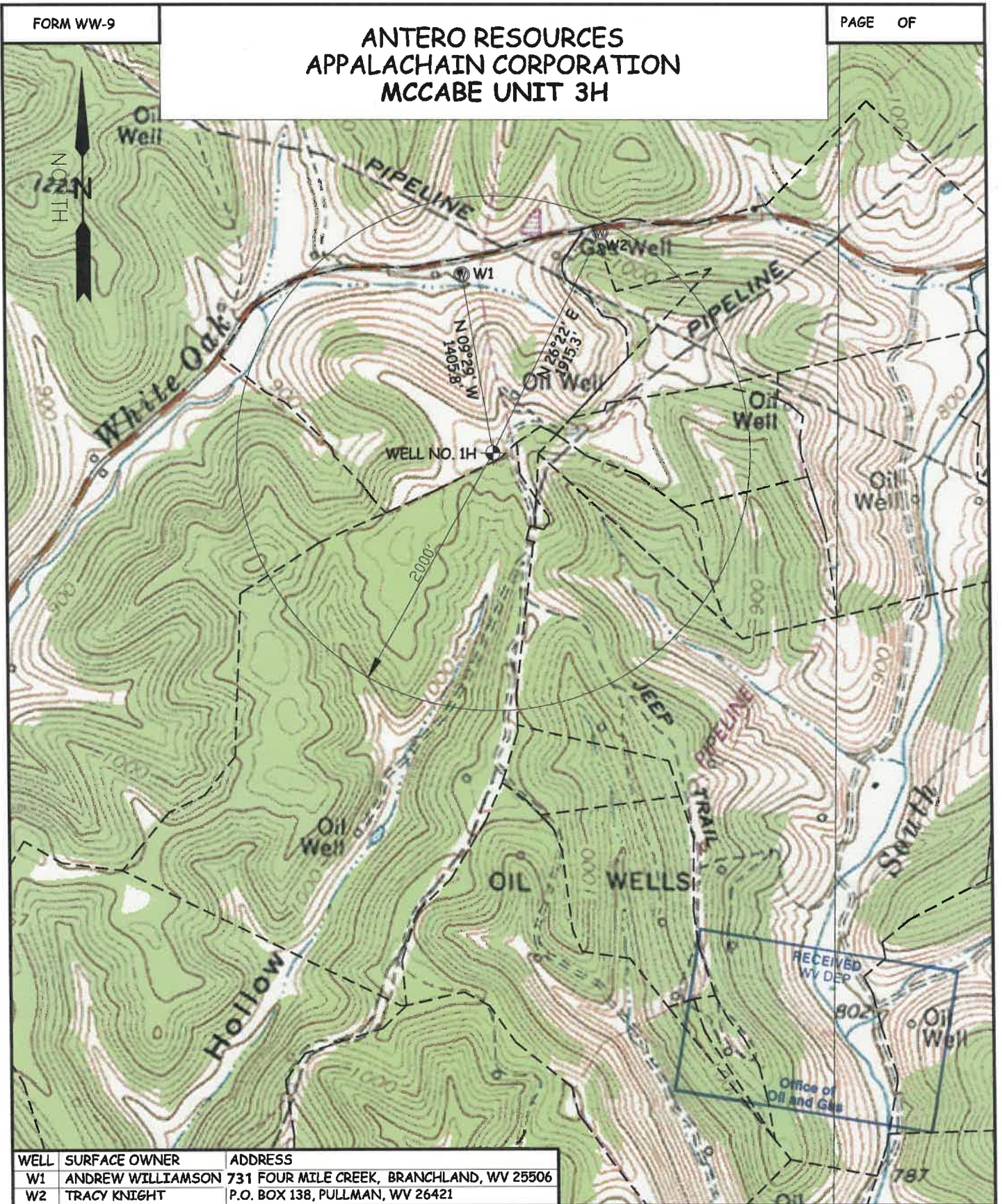
Pad Location: YOLANDA PAD
Ritchie County/Union District

GPS Coordinates: Lat 39°11'43.9"/Long 80°53'03.5"

Driving Directions: From the intersection of I-50 and Co Route 74 (just South East of the town Pennsboro) head South on W Virginia S for 7.4 miles. Take a left onto Co Rd 9/Main St., continue to follow Co Rd 9 for 4.3 miles. Take a sharp right onto Possum Run Rd for 0.5 miles, lease road will be on the right.

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JAN 23 2013
WV Department of
Environmental Protection

**ANTERO RESOURCES
APPALACHIAN CORPORATION
MCCABE UNIT 3H**



| WELL | SURFACE OWNER | ADDRESS |
|------|-------------------|--|
| W1 | ANDREW WILLIAMSON | 731 FOUR MILE CREEK, BRANCLAND, WV 25506 |
| W2 | TRACY KNIGHT | P.O. BOX 138, PULLMAN, WV 26421 |

WILLOW LAND SURVEYING PLLC
P.O. BOX 17, PENNSBORO, WV 26415
(304) 659-1717

TOPO SECTION(S) OF ;

PULLMAN 7.5' QUAD
OXFORD 7.5' QUAD

SCALE : 1-INCH = 1000-FEET

0' 1000' 2000' 3000'



DATE: 02/15/11

DRAWN BY: DRR

05/31/2024

LATITUDE 39°12'30" 2,715'

6,165' TO BOTTOM HOLE
LATITUDE 39°15'00"

LONGITUDE 80°52'30"

LONGITUDE 80°52'30"

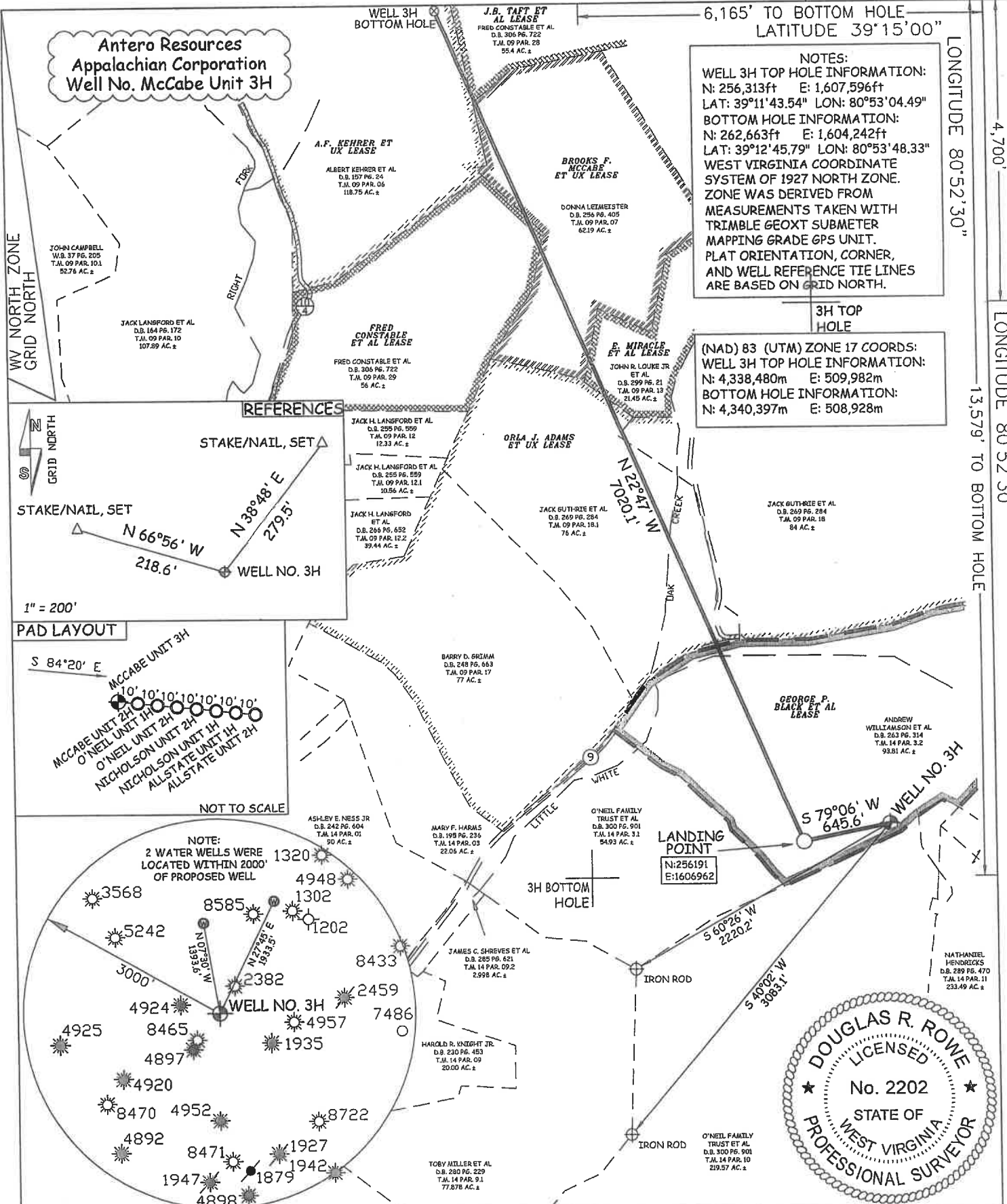
LONGITUDE 80°52'30"

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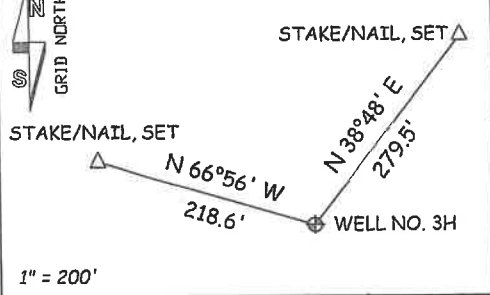
LONGITUDE 80°52'30"



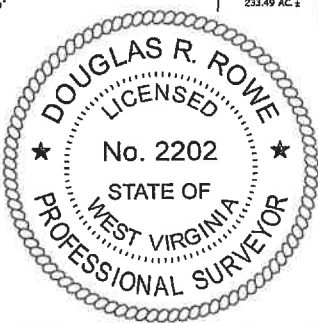
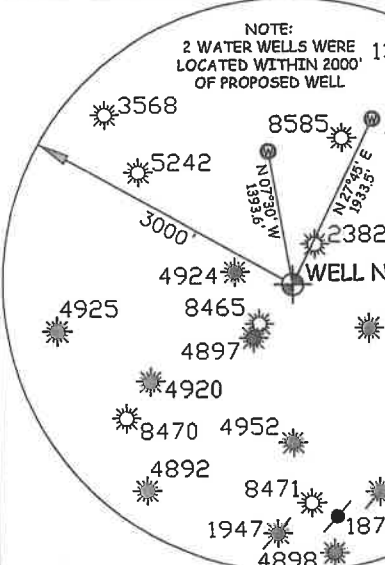
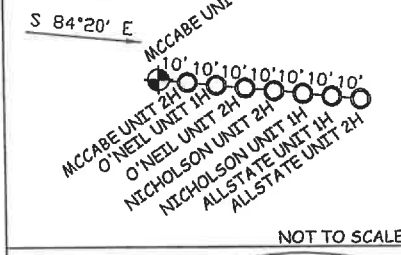
NOTES:
 WELL 3H TOP HOLE INFORMATION:
 N: 256,313ft E: 1,607,596ft
 LAT: 39°11'43.54" LON: 80°53'04.49"
 BOTTOM HOLE INFORMATION:
 N: 262,663ft E: 1,604,242ft
 LAT: 39°12'45.79" LON: 80°53'48.33"
 WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE 6EOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS:
 WELL 3H TOP HOLE INFORMATION:
 N: 4,338,480m E: 509,982m
 BOTTOM HOLE INFORMATION:
 N: 4,340,397m E: 508,928m

REFERENCES



PAD LAYOUT



JOB # 12-074WA
 DRAWING # MCCABE3HR2
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
 WILLOW LAND SURVEYING PLLC
 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

LEGEND
 - - - Surface Owner Boundary Lines +/-
 - - - Interior Surface Tracts +/-
 X Existing Fence
 ⊕ Found monument, as noted

DOUGLAS R. ROWE P.S. 2202
 DATE 11/30/12
 OPERATOR'S WELL# MCCABE UNIT #3H
 API WELL # 47 - 085
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS
 WELL TYPE: OIL ___ GAS LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS") PRODUCTION STORAGE ___ DEEP ___ SHALLOW
 LOCATION: ELEVATION 1,142' WATERSHED LITTLE WHITE OAK CREEK
 QUADRANGLE PULLMAN 7.5' DISTRICT UNION COUNTY RITCHIE

SURFACE OWNER ANDREW WILLIAMSON ET AL ACREAGE 93.81 ACRES +/- 05/31/2024
 OIL & GAS ROYALTY OWNER GEORGE P. BLACK ET AL; ORLA J. ADAMS ET UX; LEASE ACREAGE 93 ACRES±; 314 ACRES±;
 E. MIRACLE ET AL; BROOKS F. MCCABE ET UX; FRED CONSTABLE ET AL; J.B. TAFT ET AL; A.F. KEHRER ET UX 21.45 ACRES±; 63 ACRES±; 57 ACRES±; 118.75 ACRES±
 PROPOSED WORK: DRILL CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL
 (SPECIFY) ___ PLUG & ABANDON CLEAN OUT & REPLUG
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,900' TVD 14,400' MD
 WELL OPERATOR ANTERO RESOURCES APPALACHIAN CORP. DESIGNATED AGENT DIANNA STAMPER
 ADDRESS 1625 17TH STREET ADDRESS 5400 D BIG TYLER ROAD
 FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

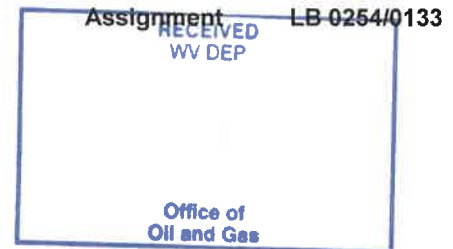
COUNTY NAME PERMIT

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6, Section 8(d)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

| Grantor, lessor, etc. | Grantee, lessee, etc. | Royalty | Book/Page |
|---|------------------------------------|---|--------------|
| <u>George P. Black et al Lease</u> | | | |
| George P. Black | Dale Wolfe | 1/8 | LB 0133/0185 |
| The George P. Black Heirs | Dale Wolfe | 1/8 | LB 0133/0205 |
| The George P. Black Heirs | Dale Wolfe | 1/8 | LB 0138/0475 |
| DC Petroleum, Inc. & Chase Petroleum, Inc. acquired rights under the original lease by mesne and sundry conveyances, mergers, and/or assignments from the original lessee, Dale Wolfe | | | |
| DC Petroleum, Inc. & Chase Petroleum, Inc. | Antero Resources Appalachian Corp | Assignment | LB 0254/0133 |
| Cara Clifford | Antero Resources Appalachian Corp | 1/8 | LB 0254/0194 |
| David T. Black | Antero Resources Appalachian Corp | 1/8 | LB 0254/0208 |
| <u>Orla J. Adams et ux Lease</u> | | | |
| Orla J. Adams | L.W. Prunty | 1/8 | LB 0090/0493 |
| Orla J. Adams | L.W. Prunty | 1/8 | LB 0088/0161 |
| Key Oil Company acquired rights under the original lease by mesne and sundry conveyances, mergers, and/or assignments from the original lessee, L.W. Prunty | | | |
| Key Oil Company | Antero Resources Appalachian Corp. | *Partial Assignment of Oil and Gas Leases | LB 0258/0505 |
| <u>E. Miracle et al Lease</u> | | | |
| Eloise Stanley Miracle, et al | Alton Skinner | 1/8 | LB 0132/0717 |
| Jean Stanley Stout, a widow | Alton Skinner | 1/8 | LB 0133/0054 |
| Jean Stanley Robey, et vir | Alton Skinner | 1/8 | LB 0133/0056 |
| Adele Stanley McDougal, et vir | Alton Skinner | 1/8 | LB 0133/0058 |
| DC Petroleum, Inc. & Chase Petroleum acquired rights under the original lease by mesne and sundry conveyances, mergers, and/or assignments from the original lessee, Alton Skinner | | | |
| DC Petroleum, Inc. & Chase Petroleum, Inc. | Antero Resources Appalachian Corp. | Assignment | LB 0254/0133 |
| <u>Brooks F. McCabe et ux Lease</u> | | | |
| Brooks F. McCabe, et ux | Alton Skinner | 1/8 | LB 0133/0299 |
| DC Petroleum, Inc. & Chase Petroleum, Inc. acquired rights under the original lease by mesne and sundry conveyances, mergers, and/or assignments from the original lessee, Alton Skinner. | | | |
| DC Petroleum, Inc. & Chase Petroleum, Inc. | Antero Resources Appalachian Corp | Assignment | LB 0254/0133 |



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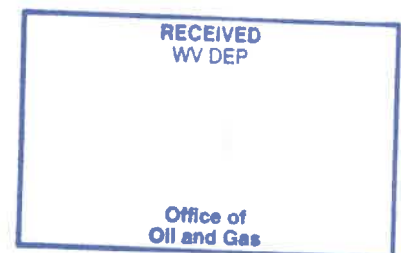
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Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (2) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (3) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

| Grantor, lessor, etc. | Grantee, lessee, etc. | Royalty | Book/Page |
|---|-----------------------------------|---|--------------|
| Fred Constable et al Lease | | | |
| Fred Constable, et ux | Key Oil Company | 15.625% | LB 0229/0151 |
| David E. Taylor, et ux | Key Oil Company | 15.625% | LB 0229/0139 |
| Bobby C. Keith, et ux | Key Oil Company | 15.625% | LB 0229/0154 |
| Bill E. Constable, et ux | Key Oil Company | 15.625% | LB 0229/0075 |
| Stalnaker Energy Corporation acquired rights under the original lease by mesne and sundry conveyances, mergers, and/or assignments from the original lessee, Key Oil Company. | | | |
| Stalnaker Energy Corporation | Antero Resources Appalachian Corp | *Partial Assignment of Oil and gas Leases | LB 0255/0017 |
| J. B. Taft et al Lease | | | |
| J. B. Taft, et al | Petroleum Development Corporation | 1/8 | LB 0133/0657 |
| PDC Mountaineer, LLC acquired rights under the original lease by mesne and sundry conveyances, mergers, and/or assignments from the original lessee, Petroleum Development Corporation. | | | |
| PDC Mountaineer, LLC | Antero Resources Appalachian Corp | Assignment | LB 0257/0537 |



(CONTINUED ON NEXT PAGE)

05/31/2024

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6A, Section 5(a)(5)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

| Grantor, Lessor, etc. | Grantee, Lessee, etc. | Royalty | Book/Page |
|---|---|-------------------|---------------------|
| A. F. Kehrer, et ux Lease | | | |
| A.F. Kehrer, et ux | A.W. Summerfield | 1/8 | LB 0128/0626 |
| PDC Mountaineer, LLC acquired rights under the original lease by mesne and sundry conveyances, mergers, and/or assignments from the original lessee, A.W. Summerfield | | | |
| PDC Mountaineer, LLC | Antero Resources Appalachian Corporation | Assignment | LB 0257/0186 |

*Partial Assignments to Antero Resources Appalachian Corporation include 100% rights to extract, produce and market the oil and gas from the Marcellus and any other formations completed with this well.

**Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

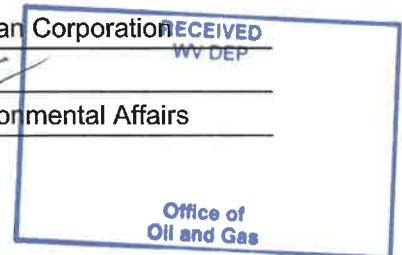
- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator: Antero Resources Appalachian Corporation

By: Randy Kloberdanz

Its: Director - Regulatory & Environmental Affairs



05/31/2024



Antero Resources
1625 17th Street
Denver, Colorado 80202
Office 303.357.7310
Fax 303.357.7315

December 4, 2012

West Virginia Department of Environmental Protection
Chief, Office of Oil and Gas
Attn: Mr. James Martin
601 57th Street SE
Charleston, WV 25304

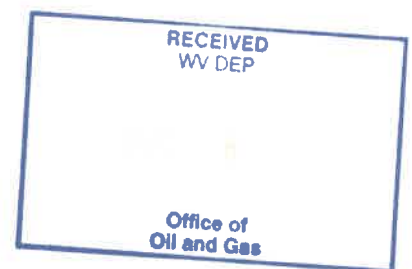
RE: McCabe Unit 3H
Quadrangle: Pullman 7.5'
Ritchie County/Union District, West Virginia

Mr. Martin:

Antero Resources Appalachian Corporation (Antero) is submitting the following application for a new well work permit for the McCabe Unit 3H horizontal shallow well. As an authorized representative, I certify that Antero has the right to extract, produce or market the oil or gas for all leases through which the McCabe Unit 3H horizontal lateral will drill through including any and all roads crossed under as identified on the attached survey plat.

Sincerely,

Sloane Ford
Landman



05/31/2024

**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE CERTIFICATION**

Date of Notice Certification: 12/03/2012

API No. 47- 085 - 15019
Operator's Well No. McCabe Unit 3H
Well Pad Name: Yolanda Pad

Notice has been given:

Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

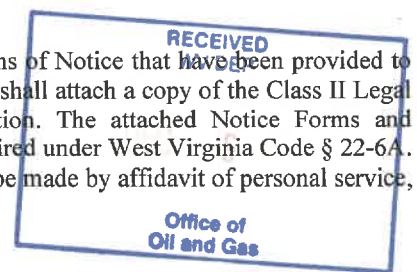
| | | |
|--|---|---------------------------|
| State: <u>West Virginia</u> | UTM NAD 83 | Easting: <u>509982m</u> |
| County: <u>Ritchie</u> | | Northing: <u>4338480m</u> |
| District: <u>Union</u> | Public Road Access: <u>County Route 9 and Possum Run Road</u> | |
| Quadrangle: <u>Pullman 7.5'</u> | Generally used farm name: <u>Williamson, Yolanda & Andrew</u> | |
| Watershed: <u>Little White Oak Creek</u> | | |

Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.

| | |
|--|---|
| <p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED <small>**Not applicable, Entry for Plat Survey was done prior to Implementation of WV Code 22-6A</small></p> <p><input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p style="padding-left: 40px;"><input checked="" type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p> | <p>OOG OFFICE USE ONLY</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input checked="" type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input checked="" type="checkbox"/> RECEIVED</p> <p><input checked="" type="checkbox"/> RECEIVED</p> <p><input checked="" type="checkbox"/> RECEIVED</p> |
|--|---|

Required Attachments:

The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

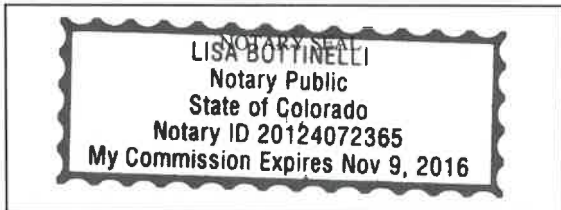


05/31/2024

Certification of Notice is hereby given:

THEREFORE, I Randy Kloberdanz, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

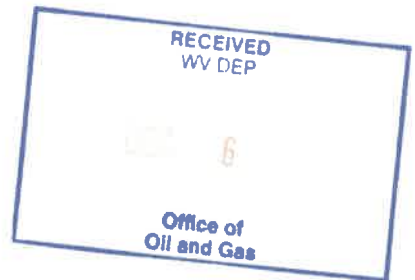
| | | | |
|----------------|--|------------|-------------------------|
| Well Operator: | <u>Antero Resources Appalachian Corporation</u> | Address: | <u>1625 17th Street</u> |
| By: | <u>Randy Kloberdanz</u> | | <u>Denver, CO 80202</u> |
| Its: | <u>Director - Regulatory & Environmental Affairs</u> | Facsimile: | <u>303-357-7315</u> |
| Telephone: | <u>303-357-7310</u> | Email: | <u></u> |



Subscribed and sworn before me this 3 day of Dec 2012.
Lisa Bottinelli Notary Public
 My Commission Expires Nov 9, 2016

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.



STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**

Date of Notice: 12/06/2012 **Date Permit Application Filed:** 12/06/2012

Notice of:

- PERMIT FOR ANY WELL WORK CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

Delivery method pursuant to West Virginia Code § 22-6A-10(b)

- PERSONAL SERVICE REGISTERED MAIL METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to W. Va. Code § 22-6A-10(b), no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner.

Notice is hereby provided to:

SURFACE OWNER(S)

Name: PLEASE SEE ATTACHMENT
Address: _____

Name: _____
Address: _____

SURFACE OWNER(S) (Road and/or Other Disturbance)

Name: Nathaniel Hendricks (second address)
Address: P.O. Box 100 P.O. Box 738, 103 Main Street
Cragsmoor, NY 12420 Putney, VT 05346

Name: _____
Address: _____

SURFACE OWNER(S) (Impoundments/Pits)

Name: Nathaniel Hendricks (second address)
Address: P.O. Box 100 P.O. Box 738, 103 Main Street
Cragsmoor, NY 12420 Putney, VT 05346

COAL OWNER OR LESSEE

Name: Yolanda & Andrew Williamson
Address: 731 Four Mile Creek
Branchland, WV 25506

COAL OPERATOR

Name: _____
Address: _____

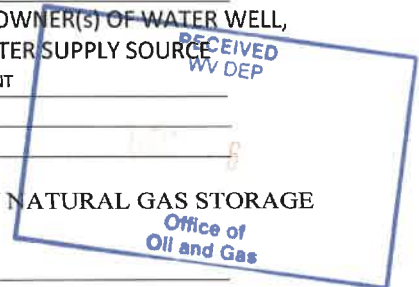
WATER PURVEYOR(S)/OWNER(S) OF WATER WELL, SPRING OR OTHER WATER SUPPLY SOURCE

Name: PLEASE SEE ATTACHMENT
Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: _____
Address: _____

*Please attach additional forms if necessary



05/31/2024

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

This Notice Shall Include:

Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall also include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Water Well Testing:

Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well.

Water Testing Laboratories:

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments.

Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No wellpad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such

05/31/2024

factors, if necessary.

Written Comment:

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the location or construction of the applicant's proposed well work to the Secretary at:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water. **NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**

Time Limits and Methods for Filing Comments.

The law requires these materials to be served on or before the date the operator files its Application. You have **THIRTY (30) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article.

Comment Requirements

Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

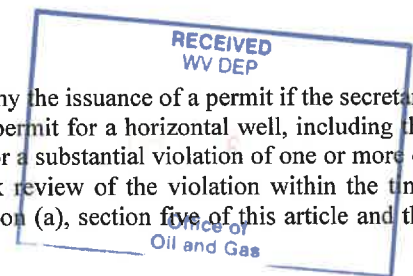
Disclaimer: All comments received will be placed on our web site <http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx> and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

Permit Denial or Condition

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

- (1) The proposed well work will constitute a hazard to the safety of persons;
- (2) The plan for soil erosion and sediment control is not adequate or effective;
- (3) Damage would occur to publicly owned lands or resources; or
- (4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.



05/31/2024

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

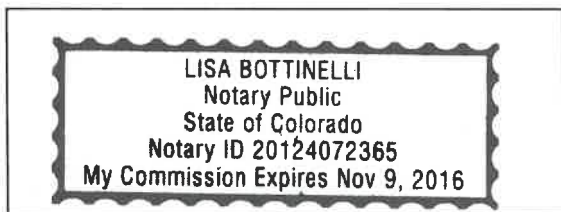
Notice is hereby given by:

Well Operator: Antero Resources Appalachian Corporation
Telephone: 303-357-7310
Email: amihalcin@anteroresources.com

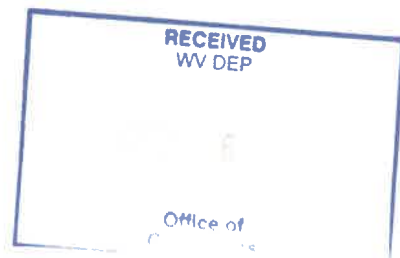
Address: 1625 17th Street
Denver, CO 80202
Facsimile: 303-358-7315

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at deprivacyofficer@wv.gov.



Subscribed and sworn before me this 3 day of Dec ¹⁸ 2012.
Lisa Bottinelli Notary Public
My Commission Expires Nov 9, 2016



WW-6A Notice of Application Attachment:

Surface Owners:

Owner: Yolanda & Andrew Williamson
Address: 731 Four Mile Creek
Branchland, WV 25506

Owner: Sean T. O'Neill
Address: 30640 Rapids Hollow Rd.
Gravois Mills, MO 65037

Owner: Nancy Louise Antill
Address: 114 Melinda Dr.
Wintersville, OH 43953

Owner: Timothy R. O'Neill
Address: P. O. Box 5063
Fort Myers Beach, FL 33932

Owner: Mary Frances Harms
Address: 4368 Steuben Woods Dr.
Steubenville, OH 43953

Owner: Romarlo, LLC
Address: 757 SE 17th Street
Fort Lauderdale, FL 33316

Owner: Kathleen R. Hooven
Address: 4 Amador
Newport Beach, CA 92657

Owner: Sharon S. O'Neill
Address: 696 San Ramon Valley Blvd, #510
Danville, CA 94526

Owner: Karah Leigh Loftin
Address: 226 Surrey Ct.
O Fallon, MO 63366

Owner: Betty O'Neill Newsom
Address: 30640 Rapids Hollow Rd.
Gravois Mills, MO 65037

Owner: Kelcie Janeen Loftin
Address: 226 Surrey Ct.
O Fallon, MO 63366

Owner: Nathaniel Hendricks
Address: P. O. Box 100
Cragmoor, NY 12420

Owner: Daniel J. O'Neill
Address: 30640 Rapids Hollow Rd.
Gravois Mills, MO 65037

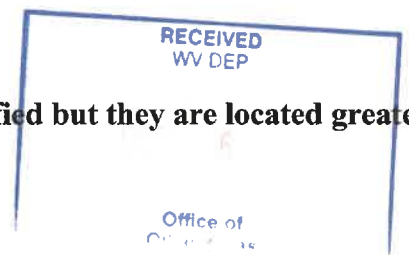
Owner: Nathaniel Hendricks
Address: P.O. Box 738
103 Main Street
Putney, VT 05346

Water Well Owner(s):

Water Well

Owner: Yolanda & Andrew Williamson
Address: 731 Four Mile Creek.
Branchland, WV 25506

(Note: On attached water well map, 1 other water well owner is identified but they are located greater than 1500' from the subject well pad location)



05/31/2024

85-10019

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

Notice Time Requirement: Notice shall be provided at least **TEN (10)** days prior to filing a permit application.

Date of Notice: 1/24/2012 and 2/21/2012 **Date Permit Application Filed:** 12/06/2012

Delivery method pursuant to West Virginia Code § 22-6A-16(b)

- HAND DELIVERY CERTIFIED MAIL RETURN RECEIPT REQUESTED

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: *Provided*, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: *Provided, however*, That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

Notice is hereby provided to the SURFACE OWNER(s):

Name: PLEASE SEE ATTACHMENT
Address: _____

Name: _____
Address: _____

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

| | | |
|--|---|---------------------------|
| State: <u>West Virginia</u> | UTM NAD 83 | Easting: <u>509982m</u> |
| County: <u>Ritchie</u> | | Northing: <u>4338480m</u> |
| District: <u>Union</u> | Public Road Access: <u>County Route 9 and Possum Run Road</u> | |
| Quadrangle: <u>Pullman 7.5'</u> | Generally used farm name: <u>Williamson, Yolanda and Andrew</u> | |
| Watershed: <u>Little White Oak Creek</u> | | |

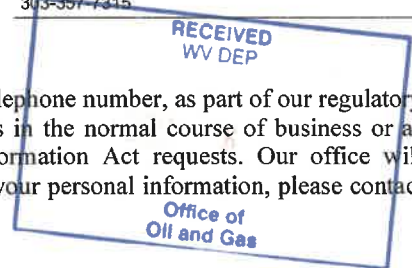
This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

Well Operator: Antero Resources Appalachian Corporation
Address: 1625 17th Street
Denver, CO 80202
Telephone: 303-357-7310
Email: amihalcin@anteroresources.com
Facsimile: 303-357-7315

Authorized Representative: Ashlie Mihalcin
Address: 1625 17th Street
Denver, CO 80202
Telephone: 303-357-7310
Email: amihalcin@anterouresources.com
Facsimile: 303-357-7315



Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

05/31/2024

WW-6A4 Notice of Intent to Drill Attachment:

Surface Owners:

Owner: Yolanda & Andrew Williamson
Address: 731 Four Mile Creek
Branchland, WV 25506 ✓

Owner: Nancy Louise Antill ✓
Address: 114 Melinda Dr.
Wintersville, OH 43953

Owner: Mary Frances Harms ✓
Address: 4368 Steuben Woods Dr.
Steubenville, OH 43953

Owner: Kathleen R. Hooven ✓
Address: 4 Amador
Newport Beach, CA 92657

Owner: Karah Leigh Loftin ✓
Address: 226 Surrey Ct.
O Fallon, MO 63366

Owner: Kelcie Janeen Loftin ✓
Address: 226 Surrey Ct.
O Fallon, MO 63366

Owner: Daniel J. O'Neill ✓
Address: 30640 Rapids Hollow Rd.
Gravois Mills, MO 65037

Owner: Sean T. O'Neill ✓
Address: 30640 Rapids Hollow Rd.
Gravois Mills, MO 65037

Owner: Timothy R. O'Neill ✓
Address: P. O. Box 5063
Fort Myers Beach, FL 33932

Owner: Romarlo, LLC ✓
Address: 757 SE 17th Street
Fort Lauderdale, FL 33316

Owner: Sharon S. O'Neill ✓
Address: 696 San Ramon Valley Blvd, #510
Danville, CA 94526

Owner: Betty O'Neill Newsom ✓
Address: 30640 Rapids Hollow Rd.
Gravois Mills, MO 65037

Owner: Sharon S. O'Neill ✓
Address: 1013 McCauley Rd
Danville, CA 94526

Owner: O'Neill Family Trust, Betty Jane O'Neill, Trustee; Daniel J. O'Neill, Trustee ✓
Address: 696 San Ramon Valley Blvd.
Danville, CA 94526

Owner: Nathaniel Hendricks ✓
Address: PO Box 100
Cragmoor, NY 12420

NOTE: Please see attached a WW-6A4 Waiver for Nathaniel Hendricks



05/31/2024

WW-6A5 Notice of Planned Operation Attachment:

Surface Owners:

Owner: Yolanda & Andrew Williamson
Address: 731 Four Mile Creek
Branchland, WV 25506

Owner: Nancy Louise Antill
Address: 114 Melinda Dr.
Wintersville, OH 43953

Owner: Mary Frances Harms
Address: 4368 Steuben Woods Dr.
Steubenville, OH 43953

Owner: Kathleen R. Hooven
Address: 4 Amador
Newport Beach, CA 92657

Owner: Karah Leigh Loftin
Address: 226 Surrey Ct.
O Fallon, MO 63366

Owner: Kelcie Janeen Loftin
Address: 226 Surrey Ct.
O Fallon, MO 63366

Owner: Daniel J. O'Neill
Address: 30640 Rapids Hollow Rd.
Gravois Mills, MO 65037

Owner: Sean T. O'Neill
Address: 30640 Rapids Hollow Rd.
Gravois Mills, MO 65037

Owner: Timothy R. O'Neill
Address: P. O. Box 5063
Fort Myers Beach, FL 33932

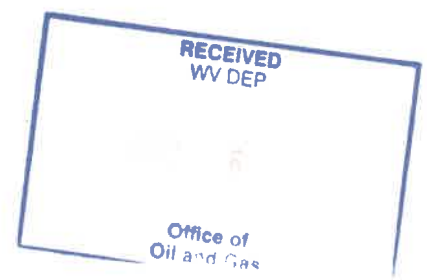
Owner: Romarlo, LLC
Address: 757 SE 17th Street
Fort Lauderdale, FL 33316

Owner: Sharon S. O'Neill
Address: 696 San Ramon Valley Blvd, #510
Danville, CA 94526

Owner: Nathaniel Hendricks
Address: P. O. Box 100
Cragmoor, NY 12420

Owner: Nathaniel Hendricks
Address: P.O. Box 738
103 Main Street
Putney, VT 05346

Owner: Betty O'Neill Newsom
Address: 30640 Rapids Hollow Rd.
Gravois Mills, MO 65037



05/31/2024

85-10019

**CERTIFICATION OF AGREEMENT WITH WVDOH
to fulfill WV Code 22, Article 6A, Section 20**

**OIL AND GAS ROAD
STATEWIDE BONDING AGREEMENT**

THIS AGREEMENT, executed in duplicate, made and entered into this 28 day of February, 2012, by and between the WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS, hereinafter called "DEPARTMENT," and Antero Resources Appalachian Corporation, a DELAWARE company, hereinafter called "COMPANY."

WITNESSETH:

WHEREAS, Company has horizontal gas well drilling operations in certain areas of West Virginia; and

WHEREAS, the Department believes that the frequent and repetitive use of certain sections of highways in the State by Company, its contractors, agents, independent contractors or suppliers of drilling materials or drilling equipment, and employees contributes to increased wear and tear to public roads in the state road system in the State, including local roads ("State Owned Roads"); and,

WHEREAS, the Department and Company have entered into this Agreement to satisfy the requirements of the Department's policy entitled "Oil & Gas Road Policy" dated January 3, 2012, as issued by Paul A. Mattox, Jr., Secretary of Transportation / Commissioner of Highways, and any subsequent related policies, hereinafter called "Policy", a copy of which is made a part of this Bonding Agreement and is identified as Attachment 1.

NOW, THEREFORE, for and in consideration of the mutual agreements hereinafter set forth, the parties agree as follows:

I. For purposes of this Bonding Agreement, "Project Transportation Usage" of the Company shall be understood to mean use of one or more State Owned Roads for the delivery and removal of drilling materials and drilling equipment at the site or location of one or more of Company's horizontal gas well pad locations. To the extent reasonably practical, prior to commencing use of a State Owned Road for Project Transportation Usage after January 1, 2011, the Company shall submit to the Department a section or sections of current official WVDOH County Highway maps identifying the exact location of the proposed project and the State Owned Roads that the Company will utilize for the Project Transportation Usage.

II. Company and Department shall within 14 days of the Company's submittal, agree to a list of these sections of State Owned Roads, hereinafter called "Project Roads List", to be utilized for each of Company's projects, identified by route number and milepost; at a time to be mutually agreed to by the parties prior to initial commencement of Project Transportation Usage of a particular State Owned Road on a Project Roads List, the Company and Department will jointly review the condition of the roads and bridges on the Project Roads List. The Department will document the road type and surface condition and general right-of-way width of each section of road on the Project Road List. Either party may supplement this documentation with photographs, video or other evidence of the present condition of the road surface, shoulders, ditches, culverts, bridges or other structures or appurtenances of roads on the Project Road List, as well as approaches to the roads, utility facilities located within or along the right-of-way, or any other condition, including third-party activities, that may affect the duties and responsibilities of the parties under this Agreement. A copy of any such documentation must be made and provided to the other party within ten business days after the joint review of the roads on the Project Roads List.

III. Department shall issue a Project Agreement or Project Permit, as appropriate, to Company to use State Owned Roads and may include any minor or major improvements required of Company prior to, during or after Project with the assignment of responsibilities of

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WV DEP
Office of
Oil and Gas

05/31/2024

both parties prior to, during and after the operator has completed well fracturing..

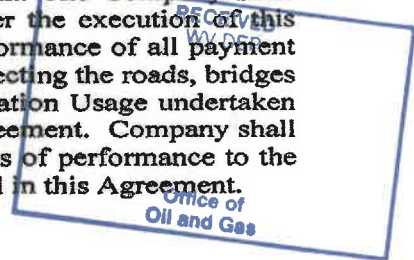
IV. In the Project Agreement/Project Permit, the Department shall not require the use of State Owned Roads other than the roads proposed by Company unless the Department has safety concerns as to the Company's proposed roads. A failure to agree on roads that may otherwise be lawfully used for a particular Project Transportation Usage shall result in the designation of the State Owned Roads proposed by Company, with milepost determinations as designated by Department. This Agreement shall only cover portions of State Owned Roads designated on the Project Roads List.

V. For the duration of Company's Project Transportation Usage of the Stated Owned Roads on the Project Roads List, whether by the Company, its contractors (while working on behalf of Company), agents, independent contractors or suppliers of drilling materials or drilling equipment, or employees, the Company agrees to pay for all reasonable maintenance and repair costs incurred by the Department to repair areas of the State Owned Roads included in the Project Roads List that were directly damaged by Company's Project Transportation Usage, as determined to be reasonably necessary and appropriate by the Department. The Department shall keep a record of all labor performed by Department employees and contractors for such maintenance and repairs and shall send an invoice for the same to Company.

VI. Company shall be responsible for the cost of all maintenance and repairs reasonably necessary to put the existing roadways, bridges and appurtenances on the Project Roads List utilized for the Project Transportation Usage in the condition that existed immediately prior to the Project Transportation Usage. Company shall not be required to pay for maintenance or repairs to put any areas of such roadways, bridges and appurtenances on the Project Roads List in a condition better than the condition that existed immediately prior to the Project Transportation Usage. Company shall also not be required to pay for maintenance or repairs to any areas of these roadways, bridges or appurtenances on the Project Roads List that are not actually utilized for the Project Transportation Usage or for damage not caused by Project Transportation Usage.

VII. Company shall notify the Department in writing of Company's final completion of Project Transportation Usage for particular roadways, bridges and appurtenances on the Project Roads List. Within fourteen days after its receipt of written notification of the completion of the Project Transportation Usage for all roads on a Project Roads List, the Department will review the condition of the roadways, bridges and appurtenances on the Project Roads List actually utilized for the Project Transportation Usage and advise Company of any final repairs reasonably necessary to leave these roads, bridges and appurtenances in a condition reasonably deemed by Department to be equal to their condition prior to commencement of Project Transportation Usage; and, upon completion of all such final repairs by or on behalf of Company and acceptance by Department, the Company shall be released from all further liability for maintenance or repairs to roads, bridges, or appurtenances on said Project Roads List. Any maintenance or repair work under the Project Agreement/Project Permit for roads, bridges or appurtenances on the Project Roads List may be performed by a contractor directly chosen by the Company as approved by the Department, the Department's workforce, or a private contractor hired by the Department through the public bid process in accordance with state law, all of which work shall be subject to the standards and specifications of the Department.

VIII. In order to ensure performance of Company's performance and payment obligations under this Bonding Agreement, the Company shall post a corporate surety bond, hereinafter called "Master Bond", with the Department named as the beneficiary, which form of bond shall be subject to the consent of the Department, not to be unreasonably withheld. The amount and form of the bond shall be in accordance with the Policy as set forth above. However, the amount of the Master Bond does not limit the amount of claims that may be made by the Department against the Company under this Bonding Agreement. The Company shall provide the Master Bond to the Department within one (1) month after the execution of this Bonding Agreement. The Master Bond shall secure the good faith performance of all payment obligations of Company under the terms of this Bonding Agreement respecting the roads, bridges and appurtenances on the Project Roads List for each Project Transportation Usage undertaken by the Company, and shall remain in effect until termination of this Agreement. Company shall not be obligated to provide any other bonds, sureties, or other guarantees of performance to the Department for Company's use of State Owned Roads, except as required in this Agreement.



05/31/2024

IX. Company shall maintain Commercial General Liability Insurance in the amount of two million dollars, with a minimum coverage of one million dollars per occurrence, for personal injury or death to persons, or for property damage, resulting from Company's Project Transportation Usage and shall present evidence of such insurance to Department upon request.

X. Company's usage of State Owned Roads under the Project Agreement/Project Permit shall comply with all applicable Federal, State and local laws and regulations including, but not limited to, to the extent applicable, the National Environmental Policy Act, Section 404 of the Clean Water Act, Section 106 of the National Historic Preservation Act, Rare, Threatened and Endangered Species Act, Section 401 Water Quality Certification, and hazardous waste requirements. Further, upon reasonable written request of Department, Company shall furnish Department with acceptable documentation of such compliance which is in the possession of the Company.

XI. Company shall defend, indemnify and hold Department harmless from and against any and all losses, damage, and liability, and from all claims for damages on account of or by reason of bodily injury, including death, which may be sustained, or claimed to be sustained, by any person or persons, including employees of Department, and from and against any and all claims, losses or liabilities for damages to property, arising out of the negligent or willful acts or omissions of Company, its agents, independent contractors and suppliers of drilling materials or drilling equipment, employees and contractors, in the performance of all Project Transportation Usage activities undertaken pursuant to this Agreement (collectively, "claims"). The Company shall not be responsible to indemnify, defend or hold harmless Department for any claims caused by the negligent or willful acts or omissions of the Department or its agents, employees and contractors or third parties not performing work at the direction of Company or delivering drilling equipment or drilling materials, including water, for use by or for company.

XII. If a provision of this Agreement is or becomes illegal, invalid or unenforceable in any jurisdiction, that shall not affect the validity or enforceability of any other provision of this Agreement; or the validity or enforceability in other jurisdictions of that or any other provision of this Agreement.

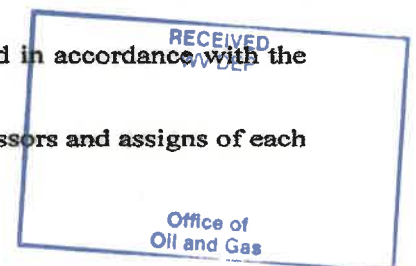
XIII. Department shall give Company a minimum of thirty days written notice of default under the terms of this Bonding Agreement and the opportunity to cure this default during such thirty-day period. If a default is not cured to the satisfaction of Department, or provision acceptable to Department is not made for a cure, Department may then elect to terminate this Bonding Agreement in whole or in part, and may in addition exercise its rights under the Master Bond or seek any other lawful relief available. Company may terminate this Bonding Agreement upon thirty days written notice to Department for any reason. In the event Company terminates this Agreement for any reason, it shall be liable for the repair and maintenance costs set forth above for prior Project Transportation Usage.

XIV. Nothing herein shall be construed to mean that Company shall have any jurisdiction or control over any public roads in the state road system.

XV. Company, its contractors, agents, employees and suppliers shall at all times be subject to applicable provisions of state and federal law, including without limitation laws requiring operation of vehicles in accordance with legal size and weight restrictions and posted weight limits. Oversize/overweight permits for vehicle or loads not otherwise conforming with law must be obtained in accordance with law; Department agrees to work in good faith with Company to review and grant (where authorized by law) such permits in a timely manner upon request by Company.

XVI. This Bonding Agreement shall be construed and enforced in accordance with the laws of the State of West Virginia, as they may be amended.

XVII. This Bonding Agreement shall be binding upon the successors and assigns of each party hereto.



05/31/2024

IN WITNESS WHEREOF, the parties hereto have caused this Bonding Agreement to be executed by their duly authorized officers effective as of the date first above written.

WEST VIRGINIA DEPARTMENT OF
TRANSPORTATION,
DIVISION OF HIGHWAYS

Doreen Baria
Witness

By: Marilyn A. Murphy
State Highway Engineer

AUSTIN RESOURCES APPALACHIAN CORPORATION

Rachel Bouchard
Witness

By: A. Schupp
Title: VP ACCOUNTING AND ADMINISTRATION

(To be executed in duplicate)

APPROVED AS TO FORM THIS
8th DAY OF Mar, 2012

J. M. Miller
ATTORNEY LEGAL DIVISION
WEST VIRGINIA DEPARTMENT
OF HIGHWAYS

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Office of
Oil and Gas

Form WW-9 Additives Attachment

SURFACE INTERVAL

1. Fresh Water
2. Soap –Foamer AC
3. Air

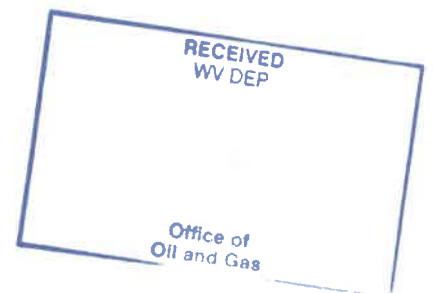
INTERMEDIATE INTERVAL

STIFF FOAM RECIPE:

- 1) 1 ppb Soda Ash / Sodium Carbonate-Alkalinity Control Agent
- 2) 1 ppb Conqor 404 (11.76 ppg) / Corrosion Inhibitor
- 3) 4 ppb KLA-Gard (9.17 ppg) / Amine Acid Complex-Shale Stabilizer
- 4) 1ppb Mil Pac R / Sodium Carboxymethylcellulose-Filtration Control Agent
- 5) 12 ppb KCL / Potassium Chloride-inorganic Salt
- 6) Fresh Water 80 bbls
- 7) Air

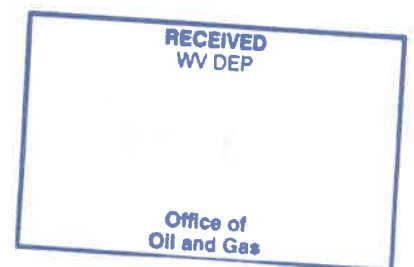
PRODUCTION INTERVAL

1. Alpha 1655
Salt Inhibitor
2. Mil-Carb
Calcium Carbonate
3. Cottonseed Hulls
Cellulose-Cottonseed Pellets – LCM
4. Mil-Seal
Vegetable, Cotton & Cellulose-Based Fiber Blend – LCM
5. Clay-Trol
Amine Acid Complex – Shale Stabilizer
6. Xan-Plex
Viscosifier For Water Based Muds
7. Mil-Pac (All Grades)
Sodium Carboxymethylcellulose – Filtration Control Agent
8. New Drill
Anionic Polyacrylamide Copolymer Emulsion – Shale Stabilizer
9. Caustic Soda
Sodium Hydroxide – Alkalinity Control
10. Mil-Lime
Calcium Hydroxide – Lime
11. LD-9
Polyether Polyol – Drilling Fluid Defoamer
12. Mil Mica
Hydro-Biotite Mica – LCM



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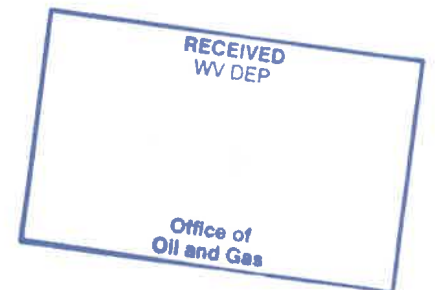
13. Escaid 110
Drilling Fluid Solvent – Aliphatic Hydrocarbon
14. Ligco
Highly Oxidized Leonardite – Filtration Control Agent
15. Super Sweep
Polypropylene – Hole Cleaning Agent
16. Sulfatrol K
Drilling Fluid Additive – Sulfonated Asphalt Residuum
17. Sodium Chloride, Anhydrous
Inorganic Salt
18. D-D
Drilling Detergent – Surfactant
19. Terra-Rate
Organic Surfactant Blend
20. W.O. Defoam
Alcohol-Based Defoamer
21. Perma-Lose HT
Fluid Loss Reducer For Water-Based Muds
22. Xan-Plex D
Polysaccharide Polymer – Drilling Fluid Viscosifier
23. Walnut Shells
Ground Cellulosic Material – Ground Walnut Shells – LCM
24. Mil-Graphite
Natural Graphite – LCM
25. Mil Bar
Barite – Weighting Agent
26. X-Cide 102
Biocide
27. Soda Ash
Sodium Carbonate – Alkalinity Control Agent
28. Clay Trol
Amine Acid complex – Shale Stabilizer
29. Sulfatrol
Sulfonated Asphalt – Shale Control Additive
30. Xanvis
Viscosifier For Water-Based Muds
31. Milstarch
Starch – Fluid Loss Reducer For Water Based Muds
32. Mil-Lube
Drilling Fluid Lubricant



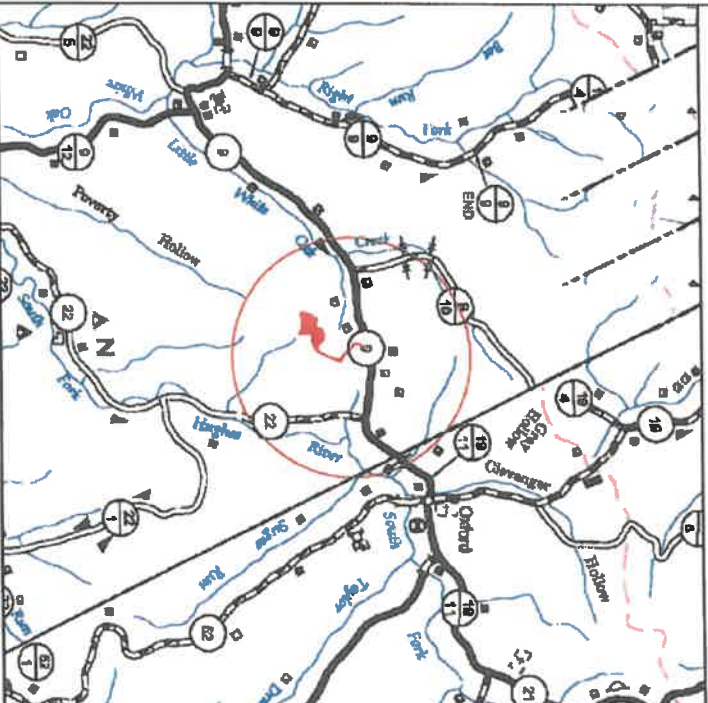
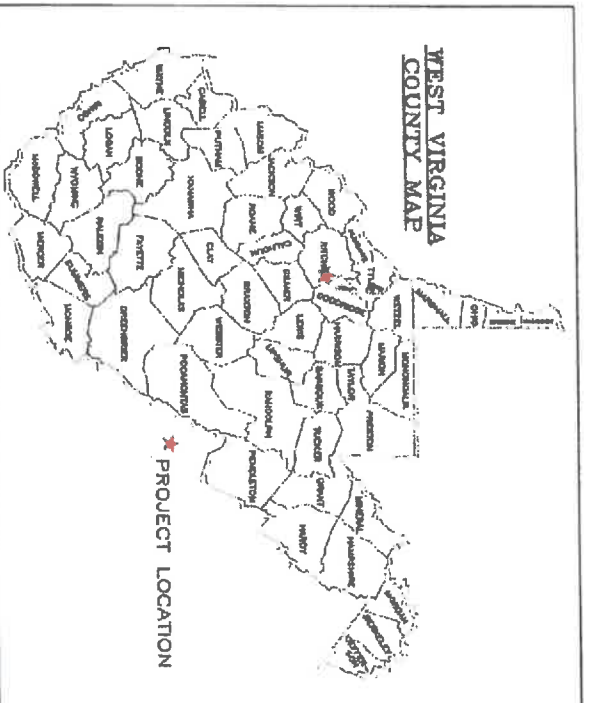
05/31/2024

List of Anticipated Additives Used for Fracturing or Stimulating Well

| Additives | Chemical Abstract Service Number (CAS #) |
|--|--|
| Fresh Water | 7732-18-5 |
| 2 Phosphobutane 1,2,4 tricarboxylic acid | 37971-36-1 |
| Ammonium Persulfate | 7727-54-0 |
| Anionic copolymer | proprietary |
| Anionic polymer | proprietary |
| BTEX Free Hydrotreated Heavy Naphtha | 64742-48-9 |
| Cellulase enzyme | (Proprietary) |
| Demulsifier Base | (Proprietary) |
| Ethoxylated alcohol blend | Mixture |
| Ethoxylated Nonylphenol | 68412-54-4 |
| Ethoxylated oleylamine | 26635-93-8 |
| Ethylene Glycol | 107-21-1 |
| Glycol Ethers | 111-76-2 |
| guar gum | 9000-30-0 |
| Hydrogen Chloride | 7647-01-0 |
| Hydrotreated light distillates, non-aromatic, BTEX free | 64742-47-8 |
| Isopropyl alcohol | 67-63-0 |
| liquid, 2,2-dibromo-3-nitrilopropionamide | 10222-01-2 |
| Microparticle | proprietary |
| Petroleum Distillates (BTEX Below Detect) | 64742-47-8 |
| Polyacrylamide | 57-55-6 |
| Propargyl Alcohol | 107-19-7 |
| Propylene Glycol | 57-55-6 |
| Quartz | 14808-60-7 |
| Sillica, crystalline quartz | 7631-86-9 |
| Sodium Chloride | 7647-14-5 |
| Sodium Hydroxide | 1310-73-2 |
| Sugar | 57-50-1 |
| Surfactant | 68439-51-0 |
| Suspending agent (solid) | 14808-60-7 |
| Tar bases, quinoline derivs, benzyl chloride-quaternized | 72480-70-7 |



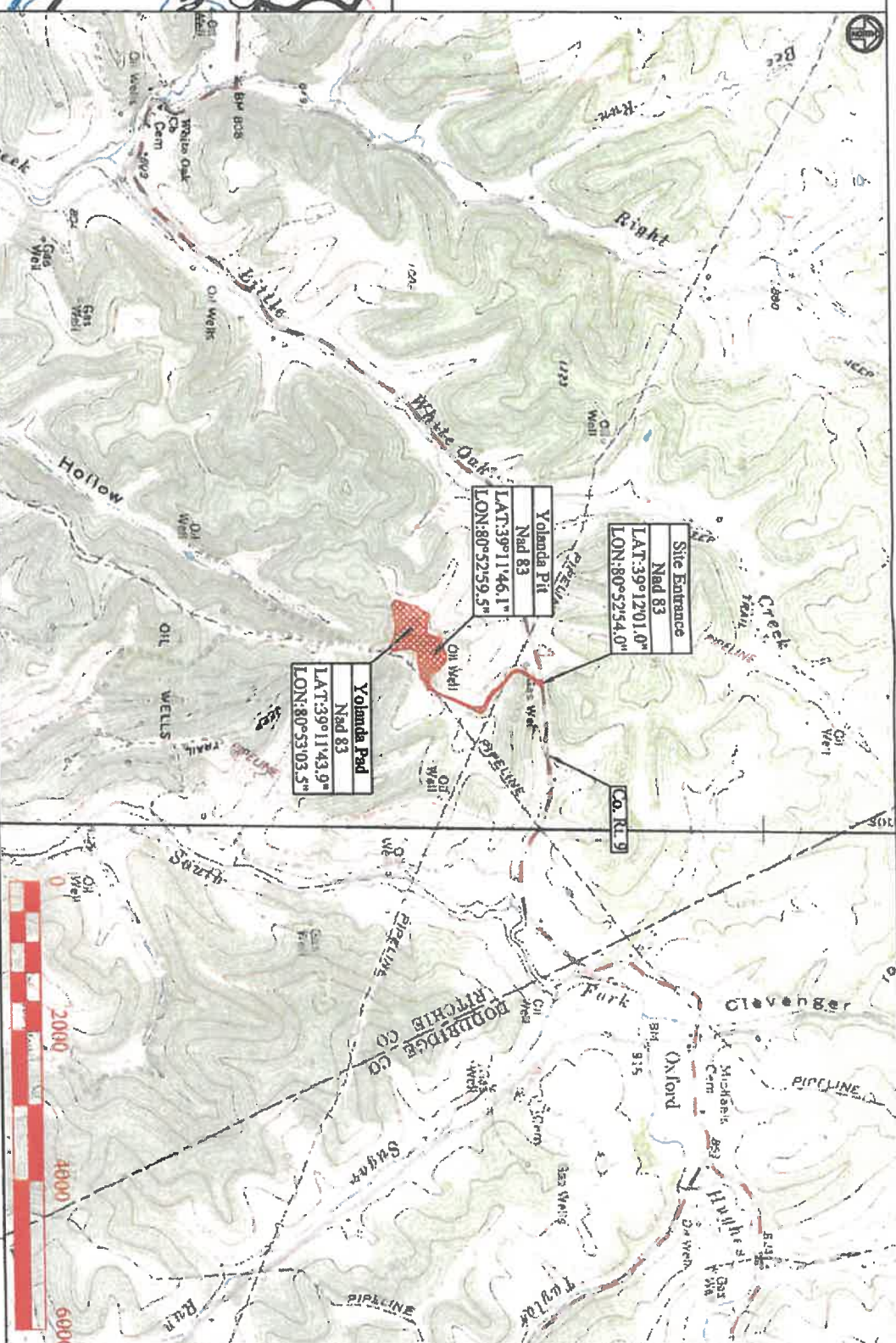
05/31/2024



MISS UTILITY OF WEST VIRGINIA
1-800-245-4848
West Virginia State Law
(Section XIV: Chapter 24-C requires that you call two business days before you dig in the state of West Virginia.)
IT'S THE LAW

Kelly S Surveying
P.O. Box 254
Fayette, WV 25840
304-333-0883

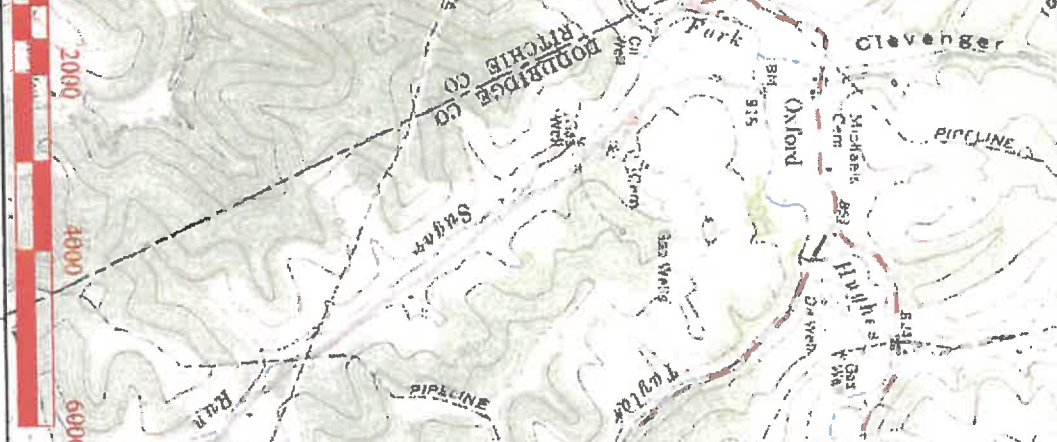
District: Union
County: Ritchie
State: West Virginia



Yolanda Pad Site As-Built Construction Plan and Erosion and Sediment Control Plan

Ritchie County
Union District

Latitude 39°11'43.9"
Longitude 80°53'03.5"



Seal

JOHN P. SEE
REGISTERED PROFESSIONAL ENGINEER
STATE OF WEST VIRGINIA
006051

Antero Resources Contact Information

John Kawcak
Mobile: (817) 368-1553
Email: jkawcak@anteroresources.com

Dusty Woods
Mobile: (817) 771-1456

Elli Wagoner
Work: (304) 622-3842
Mobile: (304) 476-9770
Email: cwagoner@anteroresources.com

Tom Wince
Work: (304) 869-3405
Mobile: (304) 483-0933
Email: twince@anteroresources.com

Date: 6/23/12

| | | |
|---|------------------------------|---------------|
| Project Site | | Sheet 1 of 21 |
| Yolanda Pad Site As-Built | | |
| District | County | State |
| Union | Ritchie | W.V. |
| WV Lands Inquiry Approval Date: 10/13/11 | | |
| WV State Historic Preservation Office Approval Date: 10/27/11 | | |
| This Pad is not in a flood zone as scaled from | | |
| FIRM Insurance Rate Map | | |
| Community Panel No.: S408SC 0225C | | |
| Gas Wells | | |
| ONeil Unit 1H | ◆ | |
| ONeil Unit 2H | ◆ | |
| Nicholson Unit 2H | ◆ | |
| Nicholson Unit 1H | ◆ | |
| 05/31/2024 | | |
| Sheet | Description | |
| 2-3 | Cover Specifications | |
| 4-5 | Erosion and Sediment Control | |
| 6-7 | Plan View | |
| 8-9 | E & S Plan View | |
| 10-11 | Pad Cross Sections & Profile | |
| 12-14 | Pit Cross Sections & Profile | |
| 15-16 | Access Road Cross Sections | |
| 17-18 | Access Road Profile | |
| 19-20 | Disturbed Area | |
| 21 | Volume Report | |
| Date: | Note: | |
| Mar. 7, 2012 | Design | |
| Aug. 10, 2012 | As-Built | |
| Design Certification | | |
| The drawings, construction notes and reference diagrams attached hereto have been prepared in accordance with the West Virginia Code of State Rules, Division of Environmental Protection, Office of Oil and Gas §35-4-21 | | |
| The information reflects a temporary face pit. | | |
| The computed above ground volume is less than 15 acre feet. | | |
| All Plans, Sheets, and/or Reference Diagrams included in this design constitute a complete set of plans. A complete set of plans is necessary to construct the site in accordance with the design. | | |
| John P. See RPE 6051; Kelly Surveying PLLC COA: CH4232-00 | | |
| DATE: JAN 28 2013 | | |
| RECEIVED | | |
| ANTERO RESOURCES | | |

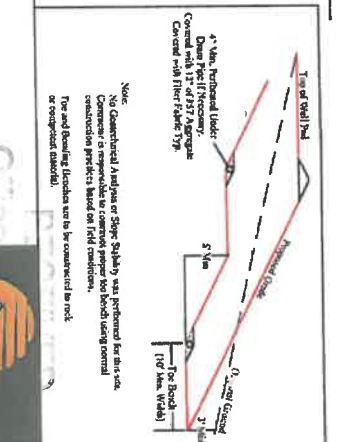
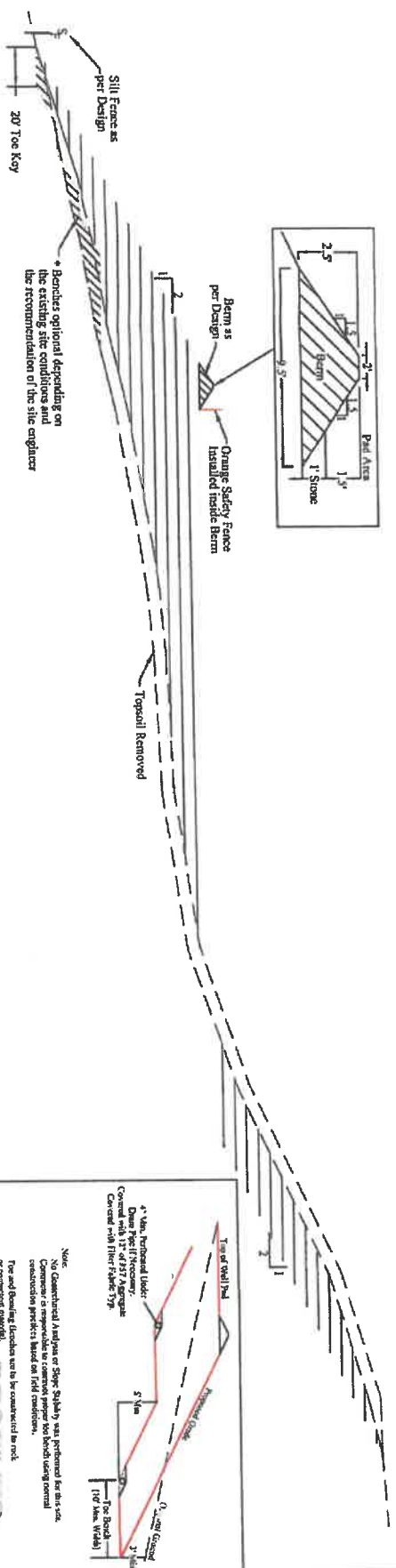
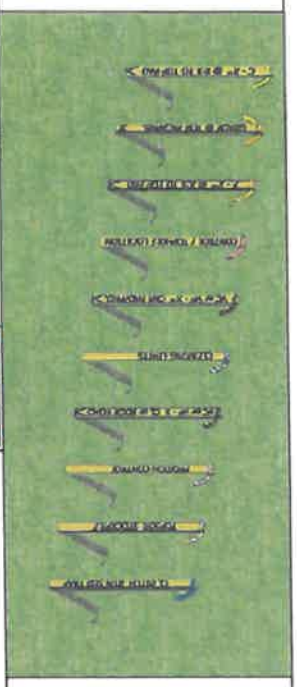
David W. Wince 12-5-12

ANTERO RESOURCES

- The Construction Drawings present the proposed lines, grades, and appurtenances to accomplish the intent of the Scope of Work.
- The Construction Drawings show the construction lines, grades, depths and dimensions on which estimated quantities are based. The construction lines, grades, depths and dimensions are subject to variation necessary to obtain subgrade and/or final grade satisfactory to the Engineer. The Engineer reserves the right to increase or diminish construction lines, grades, depths and dimensions as necessary and according to site conditions.
- All work performed and all material furnished shall conform to the lines, grades, cross sections, dimensions, and material requirements in reasonable close conformance with the Construction Drawings.
- The Contractor shall provide all reasonable facilities and furnish the Engineer, the information, assistance, and samples required by the Engineer for proper monitoring and testing of materials and workmanship. The Contractor shall have on the Project at all times, a competent superintendent capable of reading and understanding the Construction Documents and thoroughly experienced in drilling pad construction and who shall receive information from the Engineer.
- Clearing shall be completed in accordance with Section 201 of the WVDOT Specifications. Clearing is defined as the removal of trees, brush, down timber, rotten wood, rubbish, and other vegetation, and objectionable materials at or above original ground elevation not designated to be retained. Clearing also includes removal of fences, posts, signs, and demolition or removal of other obstructions interfering with the proposed work.
- Grubbing shall be completed in accordance with Section 201 of the WVDOT Specifications. Removal of stumps and roots within the cleared area unless otherwise approved by the Engineer. Grubbing is defined as the removal of below the original ground elevation of stumps, roots, stubs, brush, organic materials and debris as well as concrete and brick, and other obstructions interfering with the proposed work.
- Strip topsoil to whatever depth it may occur from trees to be excavated, filled, or graded and stockpile at a location approved for use in final grading. The topsoil shall not be used as backfill. Strip topsoil to full depth encountered in areas indicated to be graded in a manner to prevent intermingling with underlying subsoil or waste materials. Stockpile sufficient topsoil material to facilitate seeding and landscaping. Stockpile away from edge of excavations without intermingling with subsoil. Grade and slope stockpiles to drain surface water. Protect stock stockpiles using erosion and sediment control measures as directed by the Engineer or project manager.
- DO NOT deposit or bury on the site debris resulting from the clearing and grubbing without written permission from the Engineer or project manager.
- All earthwork shall be in accordance with WVDOT Standard Specifications, Section 207, unless otherwise specified or altered by the additional specifications herein.
- Subsequent to the removal of the topsoil, and prior to fill placement, exposed surface should be compacted and/or proof rolled until a relatively unyielding surface is achieved.
- Subtle soil materials are as those complying with WVDOT Standard Specifications, Section 207.
- On-site material for use as fill shall consist of excavated soil from other portions of the site. The Contractor shall use the on-site soil judiciously to facilitate the construction schedule including the use of the most readily compactible soil for fill. Topsoil shall not be utilized as engineered fill. Excavated material containing rock, stone or masonry debris smaller than six inches in its largest dimension, may be placed with suitable material and utilized.
- Imported fill shall be free of all hazardous substances. Certification of compliance and, if requested, test results substantiating compliance shall be furnished to the Engineer by the Contractor not less than one week prior to its intended use. The size of rock lumps shall not exceed thirty-six (36) inches. The rock shall not be greater in any dimension than thirty-six (36) inches. Rock is defined as follows:
 - General Excavation - Any material that cannot be excavated with a single-tool ripper drawn by a crawler tractor having a minimum draw bar pull rated at not less than 71,000 lbs. (Caterpillar D9N or equivalent), and occupying an original volume of at least 2 cubic yards or more.
- Prevent surface water and subsurface water from flowing into excavations and flooding the work. Remove water from excavations to prevent softening of foundation soils and creating soil changes detrimental to the stability of subgrades. Provide and maintain pumps, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from the site. Convey water removed from excavations to collection locations or to runoff areas. During periods of inclement weather, temporary slope drains may be used as necessary.

- Stockpile excavated materials classified as satisfactory soil material where directed, shape the stockpiles for proper drainage.
- Notify the engineer if unsuitable soil materials encountered excavate unsuitable soil materials encountered that extend below the required elevations, to the additional depth directed by the Engineer.
- Fill shall be placed in horizontal lifts of maximum loose depth of 12 inches. Compactor for mass earthwork shall be minimum five ton static drum weight vibratory roller or five ton static drum weight single footed compactor as appropriate for the type of soil material at the site or other compactor approved by the Engineer. The fill material placed shall be compacted to 95% of the maximum proctor density of the fill material's optimum moisture content. Contractor will guarantee 95% compaction.
- In areas to receive fill and at the final cut subgrade, proof roll and compact the exposed ground surface following clearing and grubbing and any required excavation with a minimum of four passes of an approved compactor and obtain at least the density required for a suitable impoundment pond foundation and as indicated below. Proof rolling shall be performed as specified, observation of the engineer as described herein. Immediately following the completion of excavation to proposed subgrades in all areas, proof rolling shall be performed by the Engineer. Proof Any areas which decline, rut or pump under the loaded dump truck shall be undercut and replaced with compacted fill material of same base course as directed by the Engineer. Proof rolling shall be done with one pass of a fully loaded tandem dump truck equal to or exceeding 50,000 lbs or other construction equipment if approved by the Engineer. Proof rolling methods shall be as follows:
 - After the subgrade has been completed the subgrade shall then be proof rolled. The coverage areas and methods will be identified by the Engineer;
 - the equipment shall be operated at a speed that the Engineer can comfortably and slowly walk along side the equipment;
 - If it becomes necessary to take corrective action, such as but not limited to underdrain installation, undercut and backfill of an unsuitable material, and creation of excessively wet material in areas that have been proof rolled. These areas shall be proof rolled again following the completion of the necessary corrections.
- Photographic Documentation is required during all phases of construction.
- Photo documentation shall include:
 - The site after clearing and grubbing operations are completed
 - Daily photos of fill and cut operations
- Before any as-built can be considered certifiable, a complete construction schedule detailing site conditions project areas worked, approximate depth of fill placed and weather conditions will be provided to the design engineer.
- This design to be used in conjunction with the acknowledgment of all regulatory agencies and obtained permit permits per current regulations. These plans do not indicate that all pertinent permits have been obtained.

| | | | |
|--|---|--|------------------------------|
| | Yellow Ribbons used to indicate top of Old (C) or New (N) subgrade. Yellow Ribbons used to indicate slope documented by the design. | | Blue & White Slope Ribbons |
| | Orange Ribbons used to indicate top of Old (C) or New (N) subgrade. Orange Ribbons used to indicate slope documented by the design. | | Orange & Black Slope Ribbons |
| | Red Ribbons used to indicate top of Old (C) or New (N) subgrade. Red Ribbons used to indicate slope documented by the design. | | Red & Black Slope Ribbons |
| | Green Ribbons used to indicate top of Old (C) or New (N) subgrade. Green Ribbons used to indicate slope documented by the design. | | Green & Black Slope Ribbons |
| | Purple Ribbons used to indicate top of Old (C) or New (N) subgrade. Purple Ribbons used to indicate slope documented by the design. | | Purple & Black Slope Ribbons |
| | Pink Ribbons used to indicate top of Old (C) or New (N) subgrade. Pink Ribbons used to indicate slope documented by the design. | | Pink & Black Slope Ribbons |
| | White Ribbons used to indicate top of Old (C) or New (N) subgrade. White Ribbons used to indicate slope documented by the design. | | White & Black Slope Ribbons |



Specifications

Kelly Surveying
 P.O. Box 224
 Charleston, WV 25329
 (800)338-0988









District: Union
 County: Ritchie
 State: West Virginia

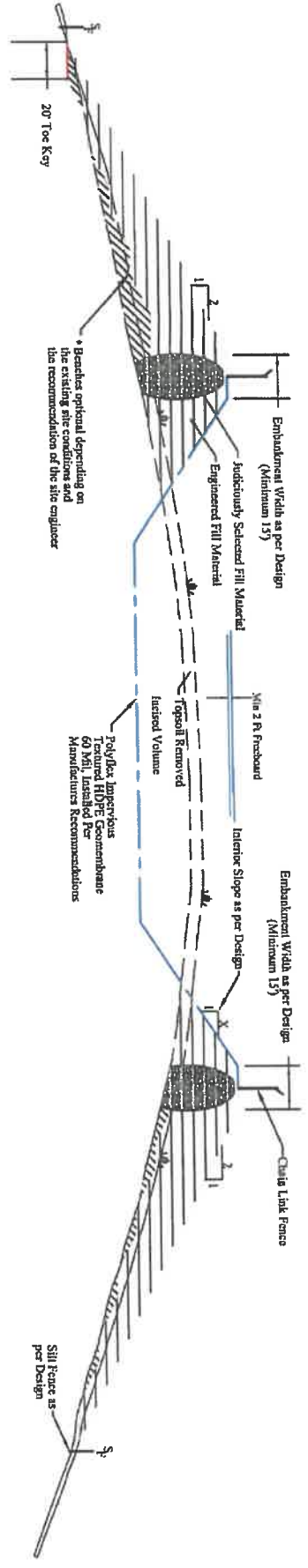


NOTE: No Geotechnical Analysis or Slope Stability was performed for this site. Contractor is responsible to conduct proper soil tests using normal construction practices based on all field observations. Pre and Backfill locations are to be constructed in rock or competent material.

05312024

1. The Construction Drawings present the proposed lines, grades, and appurtenances to accomplish the intent of the Scope of Work.
2. The Construction Drawings show the construction lines, grades, depths and dimensions on which estimated quantities are based. The construction lines, grades, depths and dimensions are subject to variation necessary to obtain subgrade and/or final grade satisfactory to the Engineer. The Engineer reserves the right to increase or diminish construction lines, grades, depths and dimensions as necessary and according to site conditions.
3. All work performed and all material furnished shall conform to the lines, grades, cross sections, dimensions, and material requirements in reasonable close conformance with the Construction Drawings.
4. The Contractor shall provide all reasonable facilities and furnish the Engineer, the information, assistance, and samples required by the Engineer for proper monitoring and testing of materials and workmanship. The Contractor shall have on the Project at all times, a competent superintendent capable of reading and understanding the Construction Documents and thoroughly experienced in impoundment pond construction and who shall receive information from the Engineer.
5. Clearing shall be completed in accordance with Section 201 of the WVDOT Specifications. Clearing is defined as the removal of trees, brush, down timber, rotten wood, rubbish, and other vegetation, and objectionable materials at or above original ground elevation not designated to be retained. Clearing also includes removal of fences, posts, signs, and demolition or removal of other obstructions interfering with the proposed work.
6. Grubbing shall be completed in accordance with Section 201 of the WVDOT Specifications. Removal of all stumps and roots within the cleared area unless otherwise approved by the Engineer. Grubbing is defined as the removal from below the original ground elevation of stumps, roots, stubs, brush, organic materials and debris as well as concrete and brick, and other obstructions interfering with the proposed work.
7. Strip topsoil to whatever depth it may occur from areas to be excavated, filled, or graded and stockpile at a location approved for use in finish grading. The topsoil shall not be used as backfill. Strip topsoil to full depth encountered in areas indicated to be graded in a manner to prevent intermingling with underlying subsoil or waste materials. Stockpile sufficient topsoil material to facilitate seeding and landscaping. Stockpile away from edge of excavations without intermingling with subsoil. Grade and slope stockpiles to drain surface water. Protect soil stockpiles using crossbars and sediment control measures as directed by the Engineer or project manager.
8. DO NOT deposit or bury on the site debris resulting from the clearing and grubbing without written permission from the Engineer or project manager.
9. All earthwork shall be in accordance with WVDOT Standard Specifications, Section 207, unless otherwise specified or altered by the additional specifications herein.
10. Subsequent to the removal of the topsoil, and prior to fill placement, exposed surface should be compacted and/or proof rolled until a relatively unyielding surface is achieved.
11. Suitable soil materials are as those complying with WVDOT Standard Specifications, Section 207.
12. On-site material for use as fill shall consist of excavated soil from other portions of the site. The Contractor shall use the on-site soil judiciously to facilitate the construction schedule including the use of the most readily compatible soil for fill. Topsoil shall not be utilized as engineered fill. Excavated material containing rock, stone or masonry debris smaller than six inches in its largest dimension, may be mixed with suitable material and utilized except in the impoundment pond core.
13. Excavated material containing rock, stone or masonry debris larger than two inches in its largest dimension may NOT be mixed with suitable material and utilized in the impoundment pond core.
14. No material greater than six inches in its largest dimension may be utilized inside filling operations.
15. Imported fill shall be free of all hazardous substances. Certification of compliance and, if required, test results substantiating compliance shall be furnished to the Engineer by the Contractor not less than one week prior to its intended use. The size of rock lumps shall not exceed thirty-six (36) inches. The rock shall not be greater in any dimension than thirty-six (36) inches. Rock is defined as follows:
 - a. General Excavation - Any material that cannot be excavated with a single-tooth tipper drawn by a crawler tractor having a minimum draw bar pull rated at not less than 71,000 lbs (Caterpillar D9N or equivalent), and occupying an original volume of at least 2 cubic yards or more.
 16. Prevent surface water and subsurface water from flowing into excavations and flooding the work. Remove water from excavations to prevent softening of foundation soils and creating soil changes detrimental to the stability of subgrades. Provide and maintain pumps, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from the site. Convey water removed from excavations to collection locations or to runoff areas. During periods of inclement weather, temporary slope drains may be utilized as necessary.

| | | | |
|---|---|---|---|
|  | Yellow Subsoil: Yellow Subsoil shall be used for all areas of Cut (C) Slope determined by the design. |  | Blue & White Stripe: Blue & White Stripe shall be used for all areas of Cut (C) Slope determined by the design. |
|  | Orange Subsoil: Orange Subsoil shall be used for all areas of Cut (C) Slope determined by the design. |  | Blue & White Stripe: Blue & White Stripe shall be used for all areas of Cut (C) Slope determined by the design. |
|  | Red Subsoil: Red Subsoil shall be used for all areas of Cut (C) Slope determined by the design. |  | Blue & White Stripe: Blue & White Stripe shall be used for all areas of Cut (C) Slope determined by the design. |
|  | Green Subsoil: Green Subsoil shall be used for all areas of Cut (C) Slope determined by the design. |  | Blue & White Stripe: Blue & White Stripe shall be used for all areas of Cut (C) Slope determined by the design. |



17. Stockpile excavated materials classified as satisfactory soil material where directed, shape the stockpiles for proper drainage.
18. Notify the engineer if unsuitable soil materials encountered excavate unsuitable soil materials encountered that extend below the required elevations, to the additional depth directed by the Engineer.
19. Fill shall be placed in horizontal lifts of maximum loose depth of 12 inches. Compactor for mass earthwork shall be minimum five ton static drum weight vibratory roller or five ton static drum weight sheeps footed compactor as appropriate for the type of soil material at the site or other compactor approved by the Engineer. The impoundment pond core of the embankment shall be compacted using a sheeps foot compactor to provide integration of lifts. The fill material placed shall be compacted to 95% of the maximum proctor density of the fill materials optimum moisture content. Contractor will guarantee 95% compaction.
20. In areas to receive fill and at the final cut subgrade, proof roll and compact the exposed ground surface following clearing and grubbing and any required excavation with a minimum of four passes of an approved compactor and obtain at least the density required for a suitable impoundment pond foundation and as indicated below. Proof rolling shall be performed as specified, observation of the engineer as described herein. Immediately following the completion of excavation to proposed subgrade in cut areas, proof rolling shall be performed as specified. Any areas which deflect, rut or pump under the loaded dump truck shall be undercut and replaced with compacted fill material or stone being course as directed by the Engineer. Proof rolling shall be done with one pass of a fully loaded tandem dump truck equal to or exceeding 50,000 lbs or other construction equipment approved by the Engineer. Proof rolling methods shall be as follows:
 - a. After the subgrade has been completed the subgrade shall then be proof rolled. The coverage areas and methods will be identified by the Engineer.
 - b. The equipment shall be operated at a speed that the Engineer can comfortably and slowly walk along side the equipment.
 - c. If it becomes necessary to take corrective action, such as but not limited to underdrain installation, undercut and backfill of an unsuitable material, and serration of excessively wet material in areas that have been proof rolled. These areas shall be proof rolled again following the completion of the necessary corrections.
21. Photographic Documentation is required during all phases of construction. Photo documentation shall include:
 - The site after clearing and grubbing operations are completed
 - The key construction
 - Daily photos of fill and cut operations
22. Before any as-built can be considered certifiable, a complete construction schedule detailing site conditions project areas worked, approximate depth of fill placed and weather conditions will be provided to the design engineer.
23. Prior to the installation of the impervious liner, the design engineer will be contacted to perform a grade verification survey for the as-built. Any variance in grade will be at the engineer's discretion as to the effect on the impoundment.
24. This design to be used in conjunction with the acknowledgment of all regulatory agencies and obtained pertinent permits per current regulations. These plans do not indicate that all pertinent permits have been obtained.

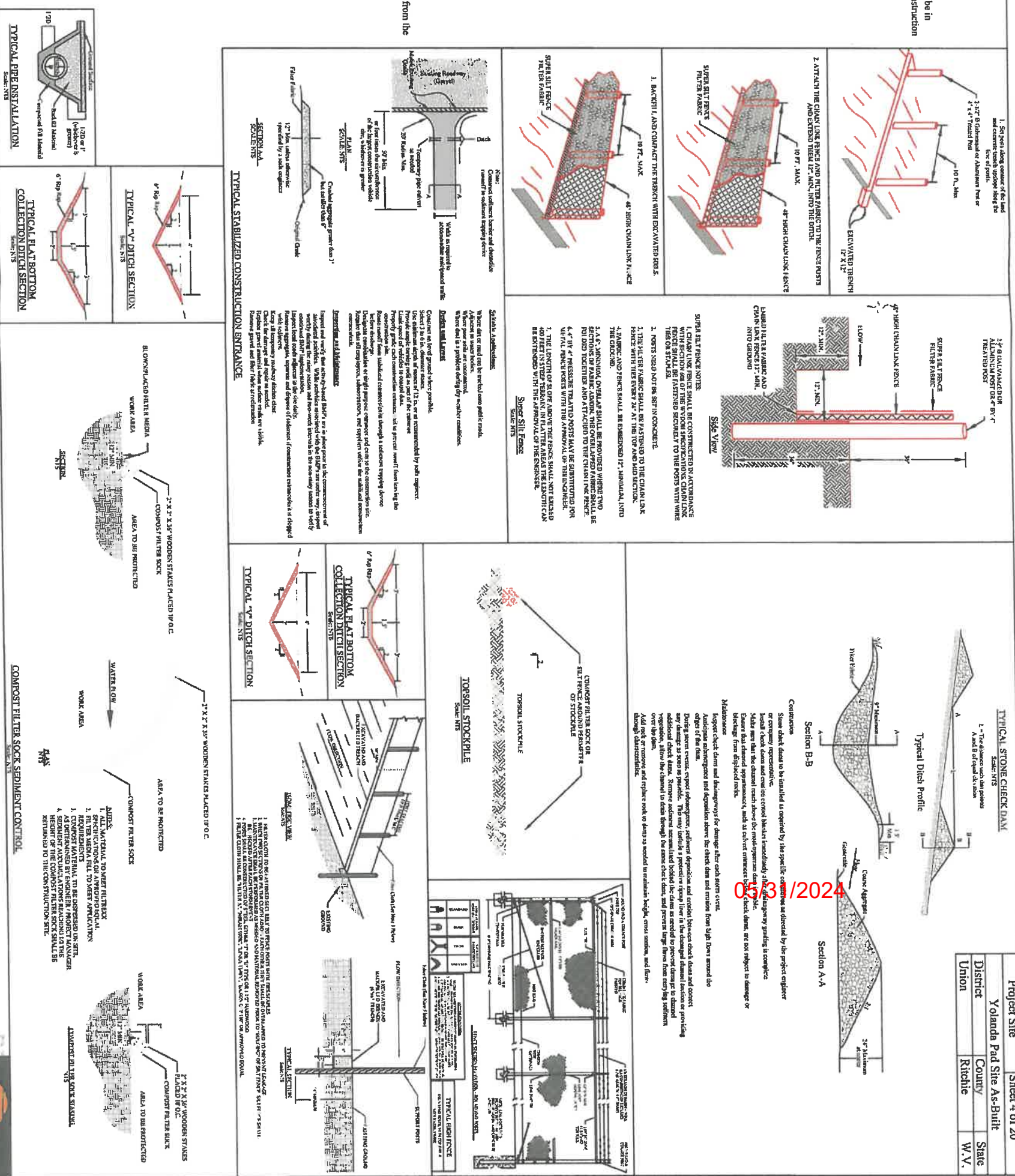
Specifications

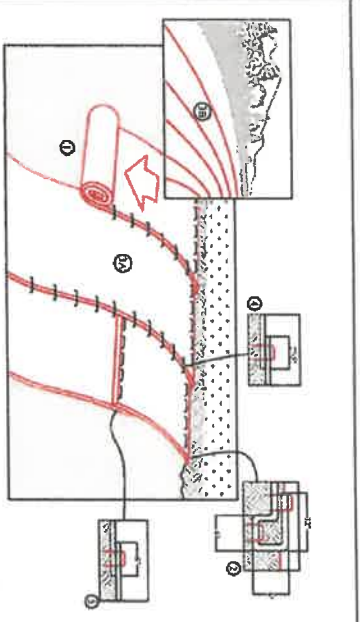
STANDARD EROSION AND SEDIMENT CONTROL PLAN NOTES:

1. Stockpile heights must not exceed 35 feet. Stockpile slopes must be 2:1 or flatter.
2. The operator shall assure that the approved erosion and sediment control plan is properly implemented. Seeding and Mulching to be in accordance with WVDOT Standard Specifications unless specified otherwise in the plans or unless specified otherwise by the construction engineer, or unless specified otherwise by the company representative.
3. Until the site achieves final stabilization, the operator shall assure that the best management practices are implemented, inspected, operated, and maintained. The operator will maintain written inspection logs. All maintenance work, including clearing, repair, replacement, regrading, and stabilization shall be performed immediately upon discovery of deficiency.
4. Erosion and sediment BMP's must be constructed, stabilized, and functional before site disturbance begins within the tributary areas of those BMP's.
5. A final site stabilization has been achieved, temporary erosion and sediment BMP's controls shall be removed. Areas disturbed during removal of the BMP's must be stabilized immediately.
6. An area shall be considered to have achieved final stabilization when it has a minimum uniform 70% perennial vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated surface erosion and subsurface characteristics to resist sliding and other movements.
7. At least three (3) days before starting any earth disturbance activity, all contractors involved in those activities shall notify Miss Utility of West Virginia at 1-800-245-4848 for buried utility locations.
8. In a timely manner after earth disturbance activities cease, the operator shall stabilize any areas disturbed by the activities. During non-germinating periods, mulch must be applied at the specified rates. Disturbed areas which are not at finished grade and which will be re-disturbed within 1 year must be stabilized in accordance with the temporary vegetative stabilization and specifications. Disturbed areas which are finished grade or which will not be re-disturbed within 1 year must be stabilized in accordance with the permanent vegetative stabilization specifications.
9. At stream crossings, 10' buffer areas should be maintained. On buffers, clearing, sod disturbances, excavation, and equipment traffic should be minimized. Activities such as stacking logs, burning cleared brush, discharging of rainwater from urethras, welding pipe sections, regrading and maintaining equipment should be accomplished outside the buffers.
10. Mulch or erosion control blankets must be installed on all slopes 3:1 and steeper.
11. Sediment removed from BMP's shall be disposed of in landscaped areas outside of steep slopes, wetlands, floodplains or drainage swales and immediately stabilized, or placed in topsoil stockpiles.
12. Sediment and materials removed from the pad sumps shall be pumped to on site holding/storage tanks and subsequently removed from the site by an approved commercial vendor.

| Seeding Chart | | | | |
|----------------------|----------------------------|------------------------|------------------------|-------------|
| Plant Name | Temporary Seed Chart | Limiting Rate (T/Acre) | Mulching Rate (T/Acre) | Mulch Type |
| | Application Rate (lb/acre) | 2 | 2.5 | Straw Mulch |
| Annual Regrass | 40 | | | |
| Permanent Seed Chart | | | | |
| Plant Name | Application Rate (lb/acre) | Limiting Rate (T/Acre) | Mulching Rate (T/Acre) | Mulch Type |
| | | 40 | | |
| Fox Tail / Grassy | | 30 | | |
| Perennial Rye | | 3 | 2.5 | Straw Mulch |
| Crown Vetch | | 20 | | |

*Or as recommended by a local recognized seed supplier approved by the Owner's Representative.



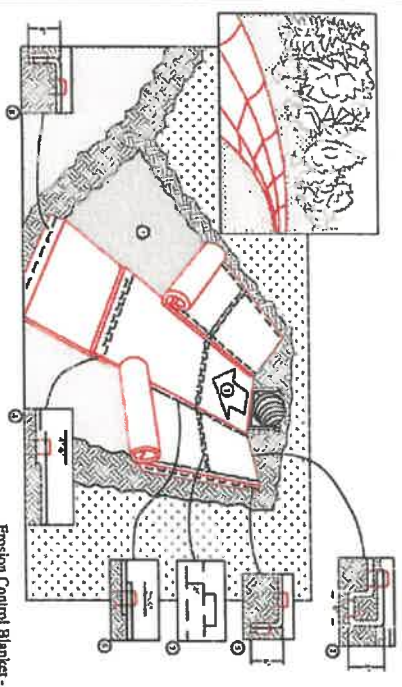


Erosion Control Blanket - Stone Installation
 Scale: NTS

- NOTES:**
- Prepare and install existing graded erosion control product (ECRP), including any necessary application of seed and fertilizer.
 - Apply and install ECRP by installing the ECRP in a 4' x 4' (30" x 30") "Water Truck" grid pattern. The ECRP shall be installed over the 12" gravel and 12" sand layers. The ECRP shall be installed over the 12" gravel and 12" sand layers. The ECRP shall be installed over the 12" gravel and 12" sand layers.
 - Install the ECRP in a 4' x 4' (30" x 30") grid pattern. The ECRP shall be installed over the 12" gravel and 12" sand layers. The ECRP shall be installed over the 12" gravel and 12" sand layers.
 - The edge of graded ECRP shall be secured with a 2" x 4" wooden board. The ECRP shall be secured with a 2" x 4" wooden board. The ECRP shall be secured with a 2" x 4" wooden board.
 - Connect the ECRP to the existing drainage system. The ECRP shall be connected to the existing drainage system. The ECRP shall be connected to the existing drainage system.
- NOTE:** The use of rock or other large stones may be necessary to properly secure the ECRP.

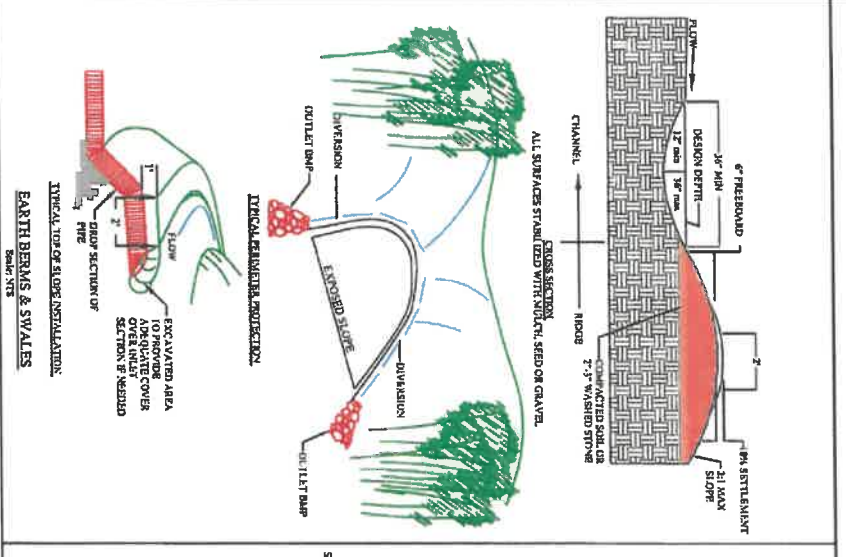


Use North American Green S1500N or Approved Equivalent

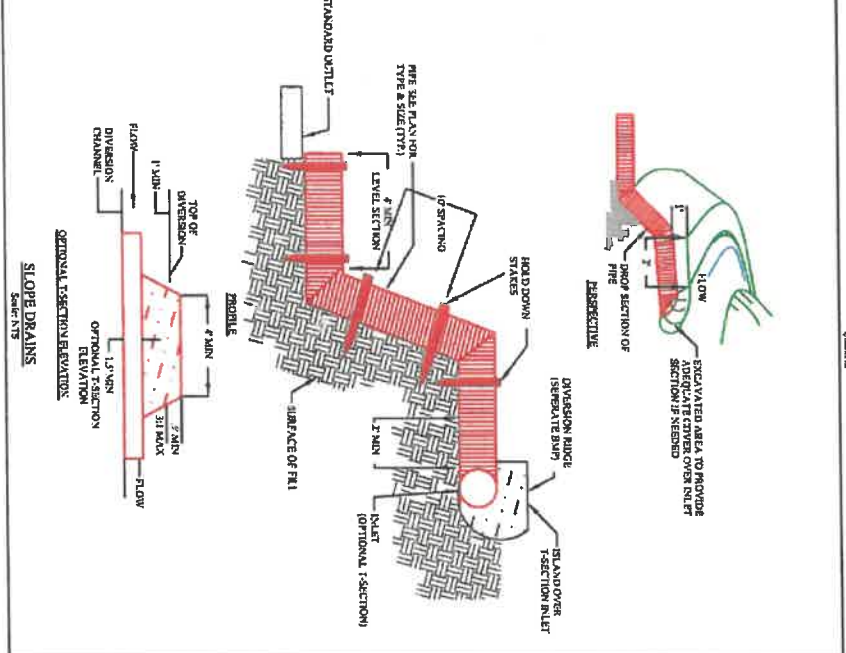


Erosion Control Blanket - Channel Installation
 Scale: NTS

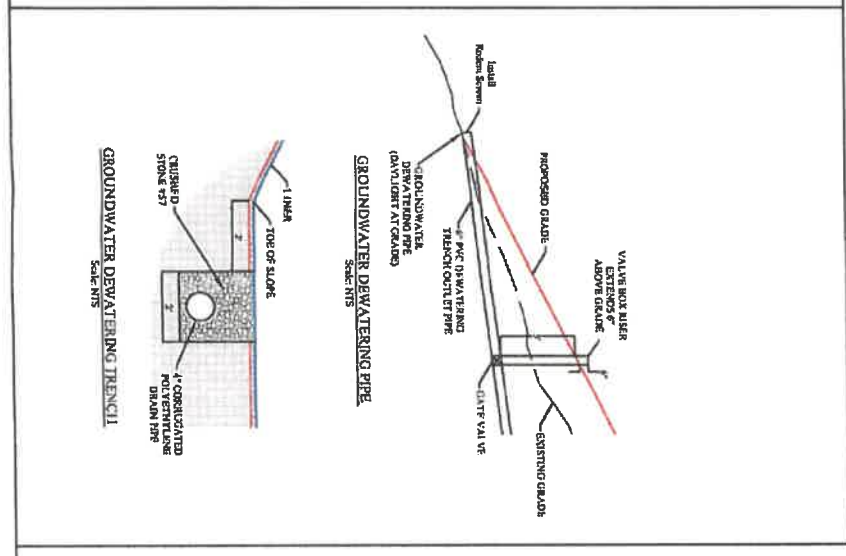
- CRITICAL POINTS:**
- OVERLAY AND BEAM
 - CHANNEL BOTTOM
 - SLOPE VERTICES
- Prepare and install existing graded erosion control product (ECRP), including any necessary application of seed and fertilizer.
 - Apply and install ECRP by installing the ECRP in a 4' x 4' (30" x 30") "Water Truck" grid pattern. The ECRP shall be installed over the 12" gravel and 12" sand layers. The ECRP shall be installed over the 12" gravel and 12" sand layers.
 - Install the ECRP in a 4' x 4' (30" x 30") grid pattern. The ECRP shall be installed over the 12" gravel and 12" sand layers. The ECRP shall be installed over the 12" gravel and 12" sand layers.
 - Place concrete blankets and cover with a 4" x 4" grid. Use a double row of spaced staggered 4" x 4" to cover to secure blankets.
 - Place length of blankets at edge of ditch. They must be attached with a row of spaced staggered approximately 12" apart in a 4' x 4' grid pattern. Blankets and concrete for roads after paving.
 - Adjacent blankets must be overlapped approximately 2" (depending on blanket type) and applied to secure proper seam alignment. Place the edge of the overlapping blanket (blanket being installed on top) over with the concrete cover block on the blanket being overlapped.
 - In high flow channels applications a double decker blanket is recommended at 12" x 12" spacing. Use a double row of spaced staggered 4" x 4" to cover to secure blankets.
 - The bottom end of the blankets must be secured with a row of spaced staggered approximately 12" apart in a 4' x 4' grid pattern. Blankets and concrete for roads after paving.
 - When used, blankets are applied to the slope by staking.
- NOTE:** Horizontal length spacing should be allowed if necessary to allow proper to secure the critical points along the blankets.
- NOTE:** In force and conditions, the use of rock or other large stones may be necessary to properly secure the blankets.



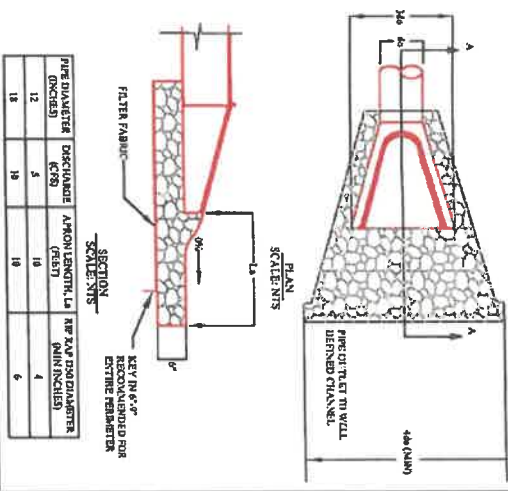
Typical Top of Slope Installation
 Scale: NTS



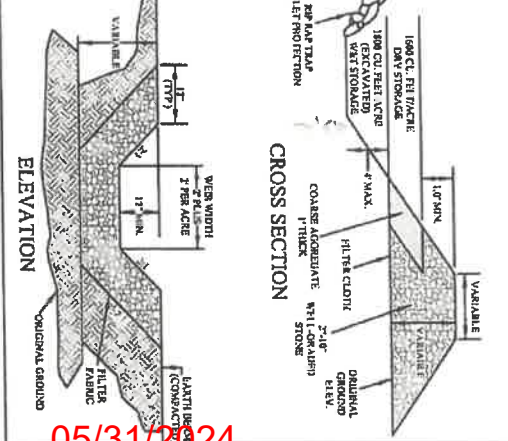
Standard Outlet
 Scale: NTS



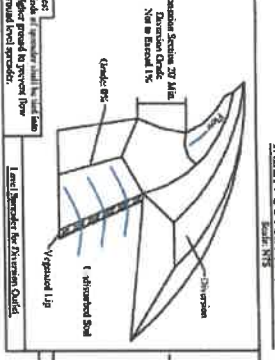
Groundwater De-watering Trench
 Scale: NTS



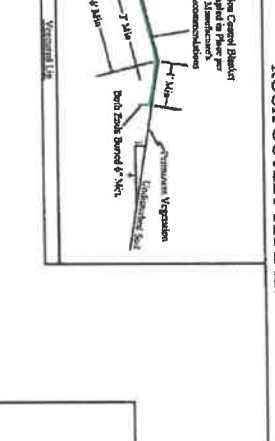
Inlet/Outlet Protection
 Scale: NTS



Rock Outlet Sediment Trap
 Scale: NTS

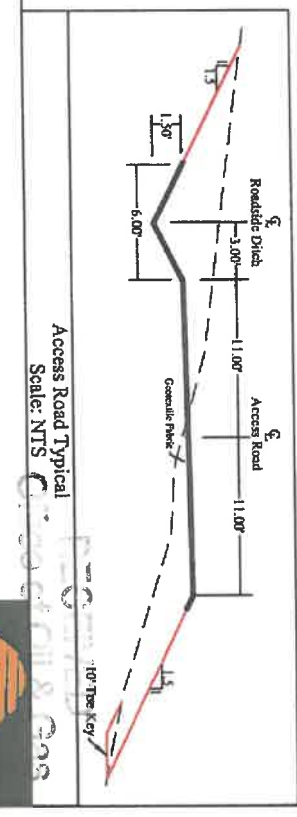
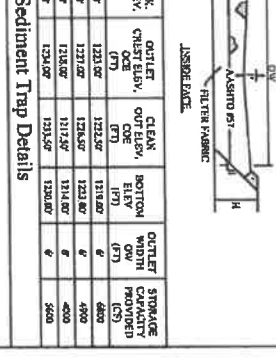


Valve Box Riser
 Scale: NTS

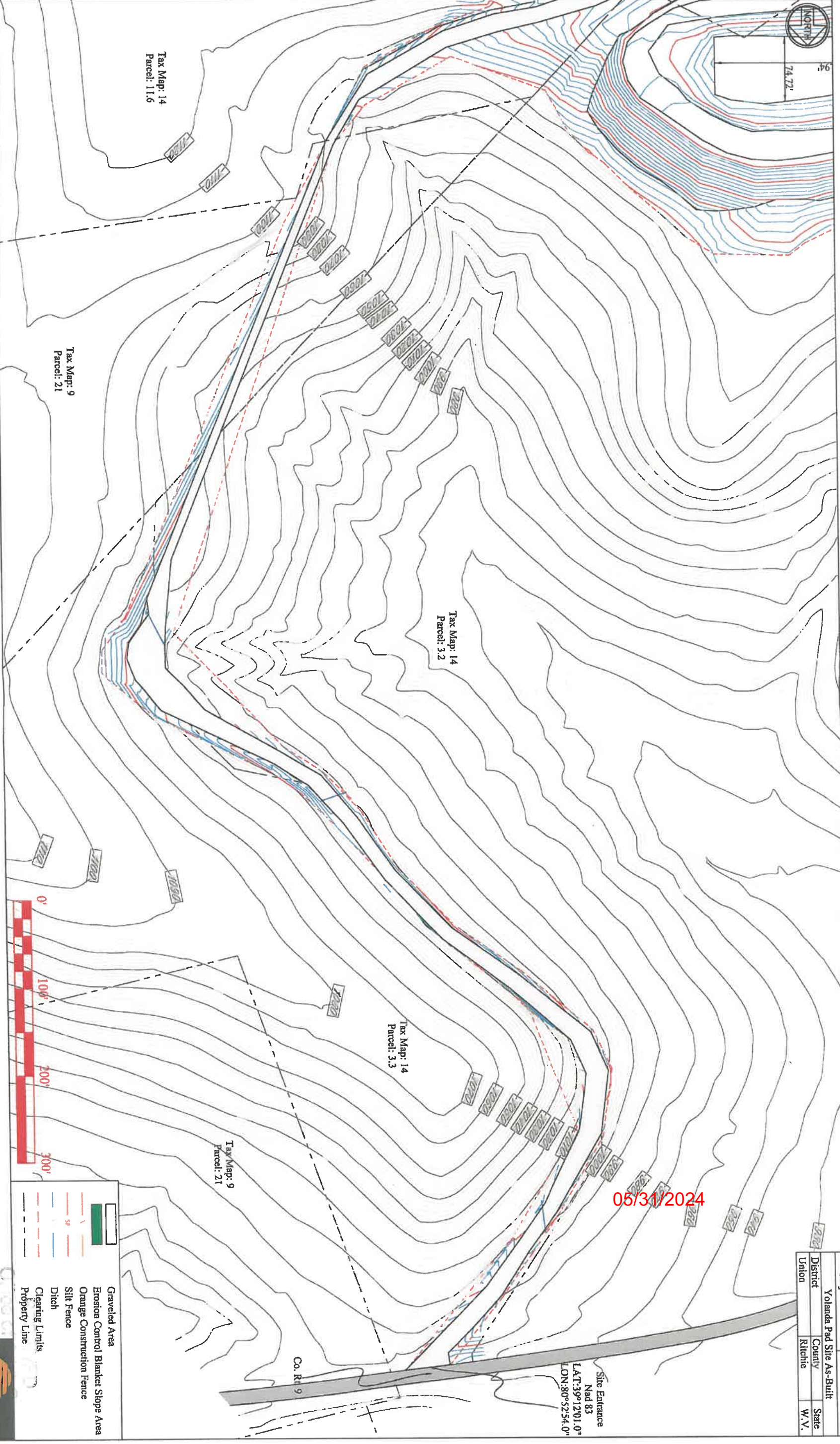


Groundwater De-watering Trench
 Scale: NTS

| TRAP NO. | INLET ELEV. (FT) | OUTLET ELEV. (FT) | CLEAN ELEV. (FT) | BOTTOM WITH STRAINER (FT) | OUTLET STRAINER (FT) |
|----------|------------------|-------------------|------------------|---------------------------|----------------------|
| 1 | 1234.00 | 1231.00 | 1232.50 | 1231.00 | 400 |
| 2 | 1235.00 | 1232.00 | 1233.50 | 1232.00 | 400 |
| 3 | 1236.00 | 1233.00 | 1234.50 | 1233.00 | 400 |
| 4 | 1237.00 | 1234.00 | 1235.50 | 1234.00 | 400 |



Access Road Typical
 Scale: NTS



05/31/2024

| | |
|---------------------------|---------------|
| Project Site | Sheet 6 of 20 |
| Yolanda Pad Site As-Built | |
| District | Union |
| County | Ritchie |
| State | W. V. |

Site Entrance
 Nad 83
 LAT: 39°12'01.0"
 LON: 80°52'54.0"



- Graveled Area
- Erosion Control Blanket Slope Area
- Orange Construction Fence
- Silt Fence
- Ditch
- Clearing Limits
- Property Line

Kelly S Surveying
 P.O. Box 224
 Paducah, WV 26029
 606338-0985

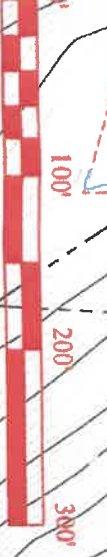
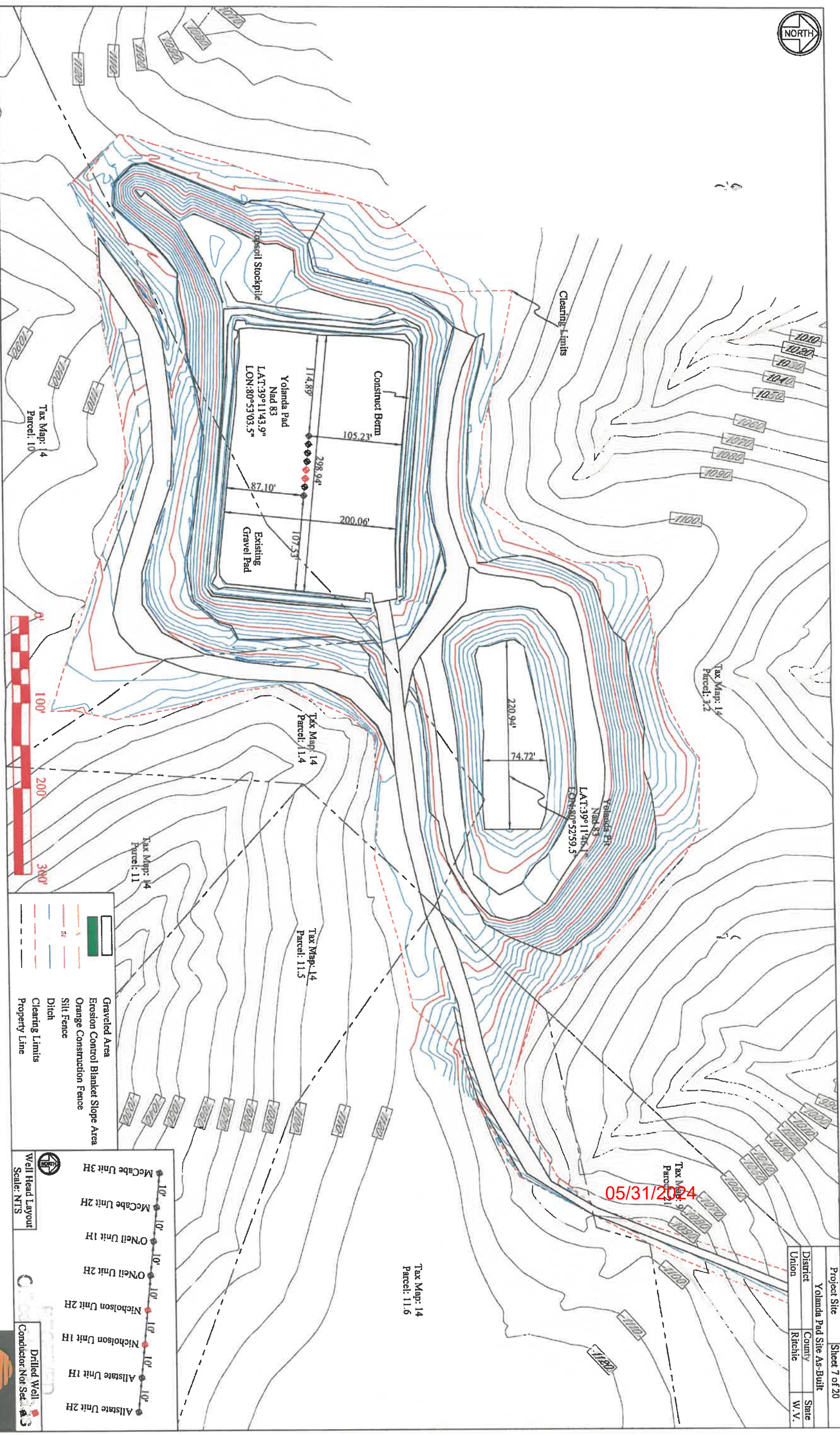
District: Union
 County: Ritchie
 State: West Virginia

Yolanda Pad Site As-Built Plan View

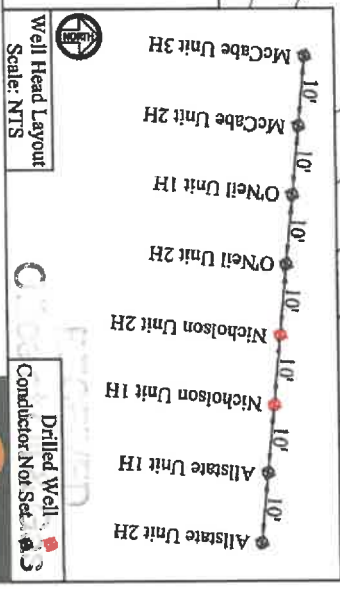




| | |
|---------------------------|---------------|
| Project Site | Sheet 7 of 20 |
| Yolanda Pad Site As-Built | |
| District | Union |
| County | Richie |
| State | W.V. |



- Graveled Area
- Erosion Control Blanket Slope Area
- Orange Construction Fence
- Silt Fence
- Ditch
- Clearing Limits
- Property Line

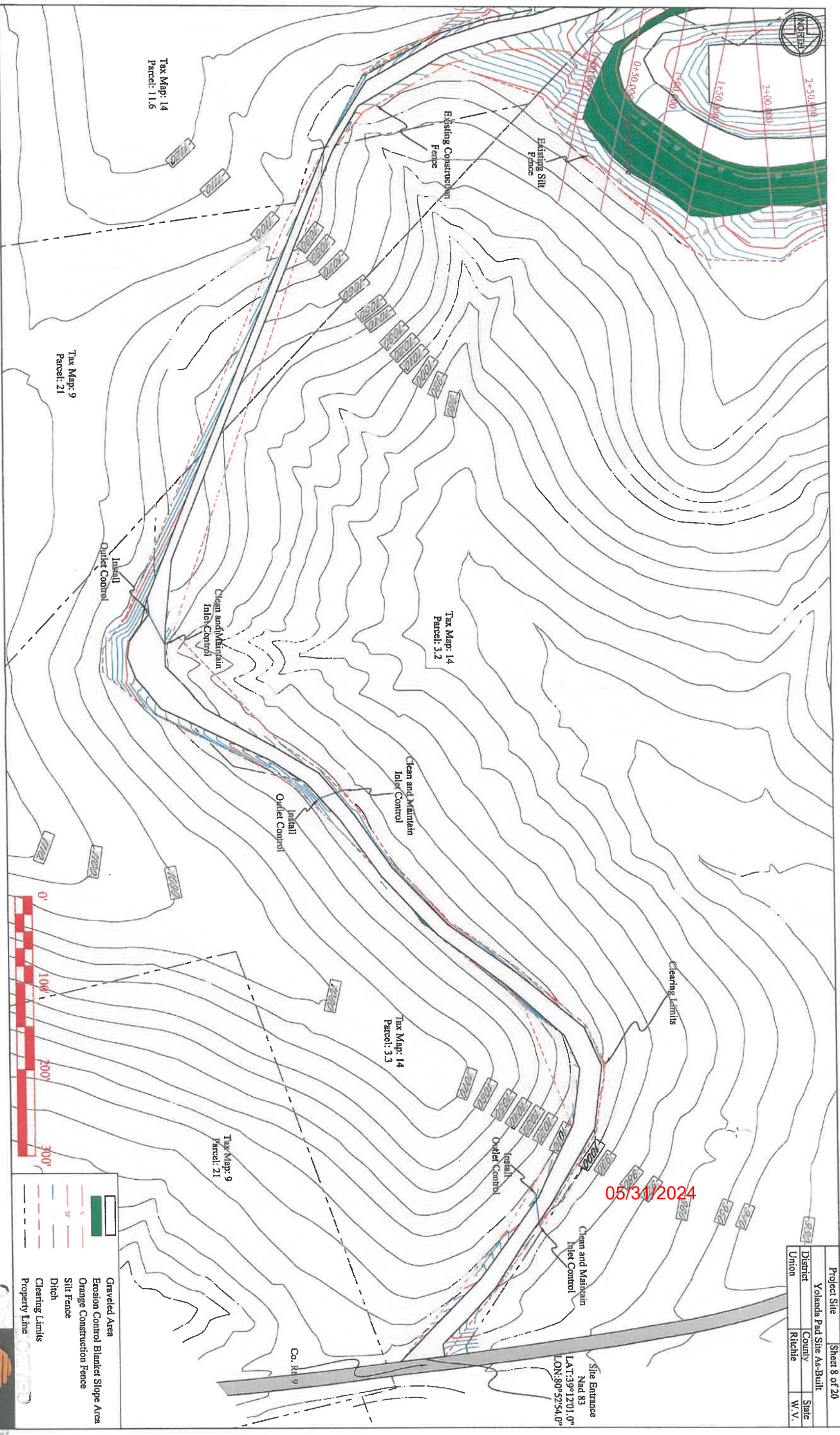


Kelly S. Surveying
 P.O. Box 1224
 Charleston, West Virginia 25301-1224

District: Union
 County: Ritchie
 State: West Virginia

Yolanda Pad Site As-Built Plan View





| | |
|---------------------------|---------------|
| Project Site | Sheet 8 of 20 |
| Yolanda Pad Site As-Built | |
| District | Union |
| County | Richie |
| State | W.V. |

Site Entrance
Nad 83
LAT: 39°12'01.0"
LON: 80°52'54.0"

Co. Rd 9

- Graveled Area
- Erosion Control Blanket Slope Area
- Orange Construction Fence
- Silt Fence
- Ditch
- Clearing Limits
- Property Line



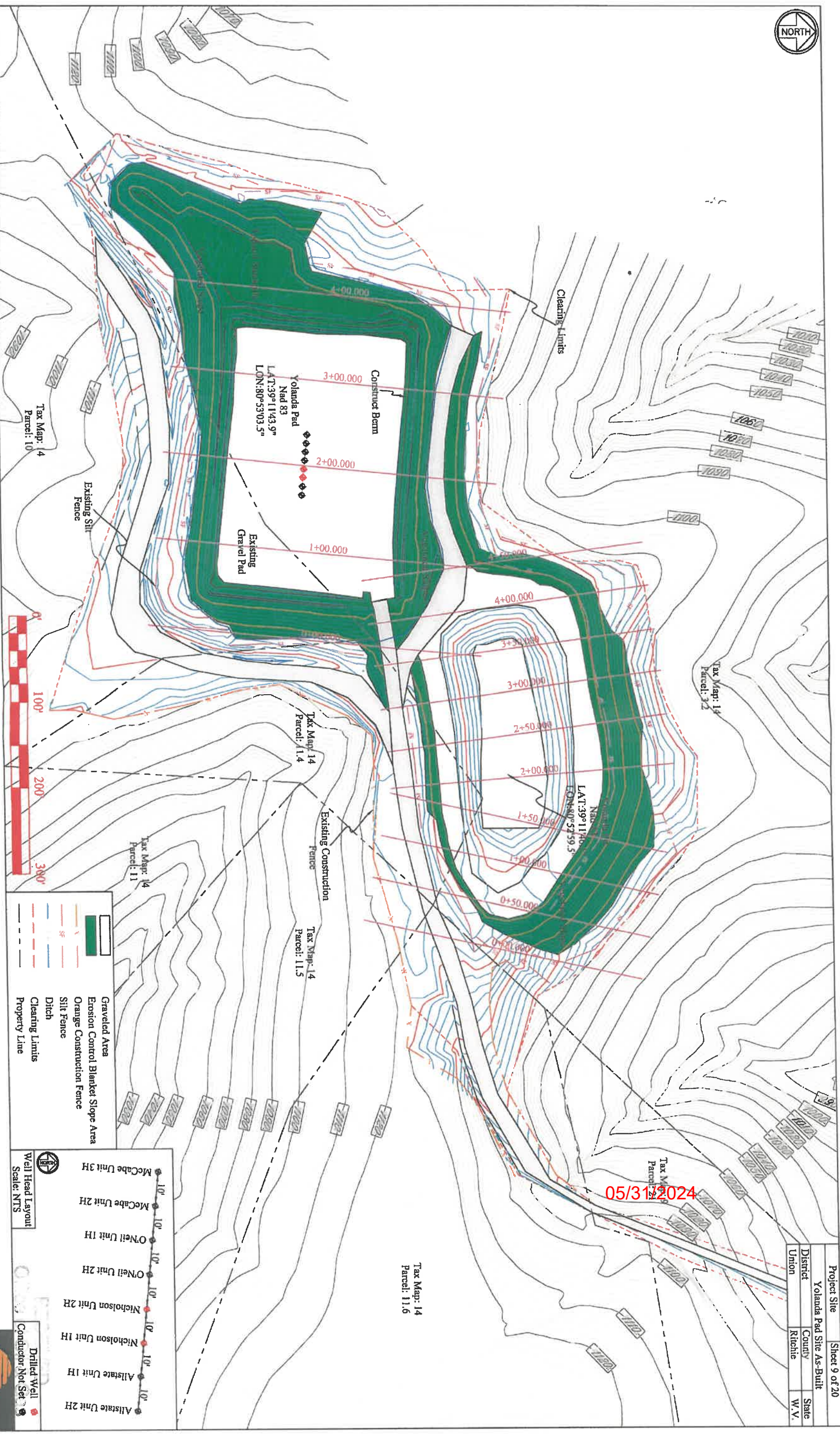
District: Union
County: Ritchie
State: West Virginia

Yolanda Pad Site As-Built Erosion and Sediment Control

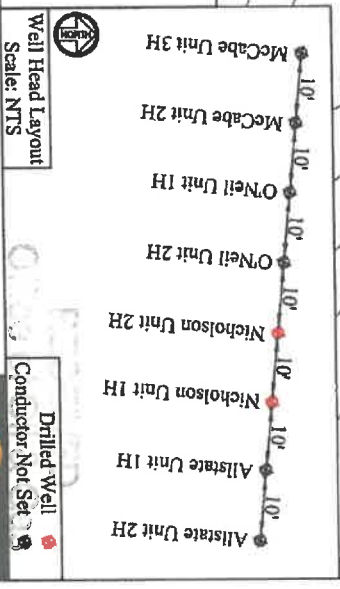




| | |
|---------------------------|---------------|
| Project Site | Sheet 9 of 20 |
| Yolanda Pad Site As-Built | |
| District | County |
| Union | Richie |
| | W. V. |



- Graveled Area
- Erosion Control Blanket Slope Area
- Orange Construction Fence
- Silt Fence
- Ditch
- Clearing Limits
- Property Line

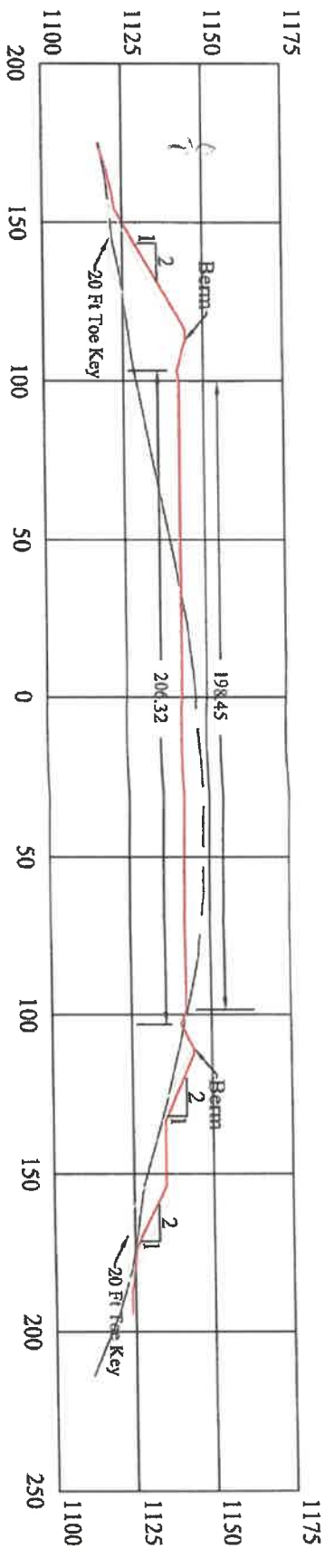


Kelly Surveying
 P.O. Box 224
 Dalton, WV 26029
 (304) 338-4885

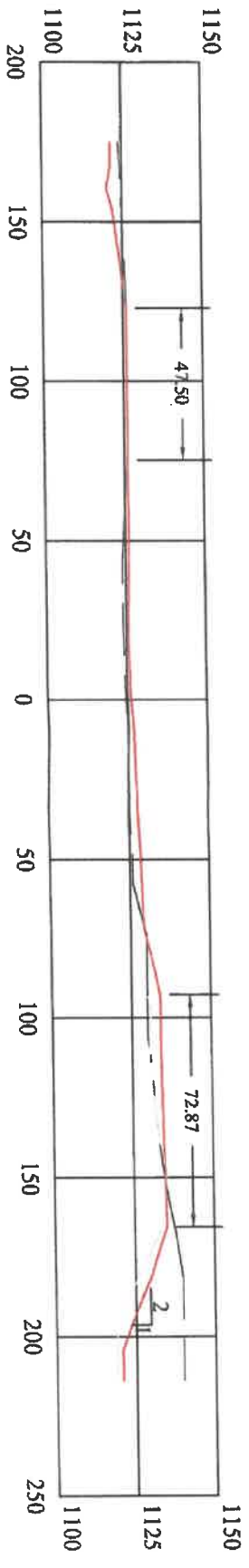
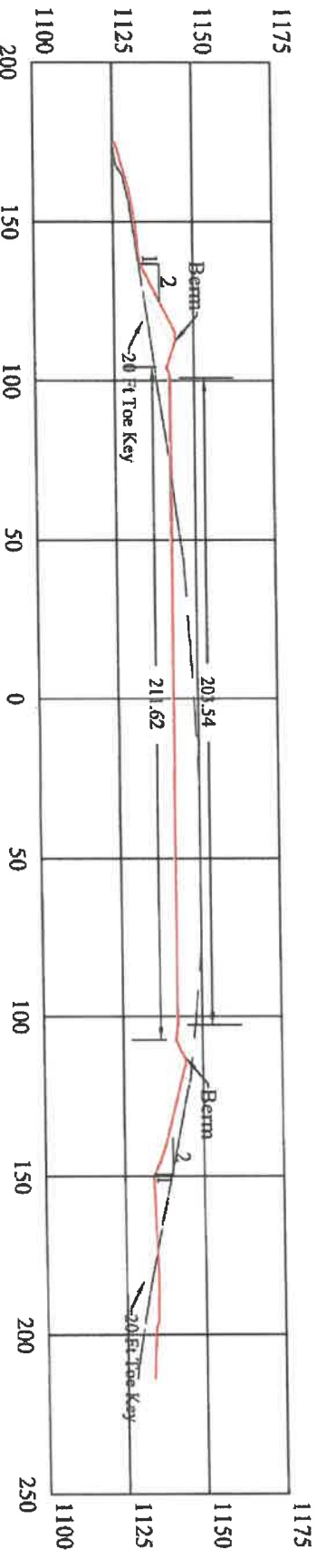
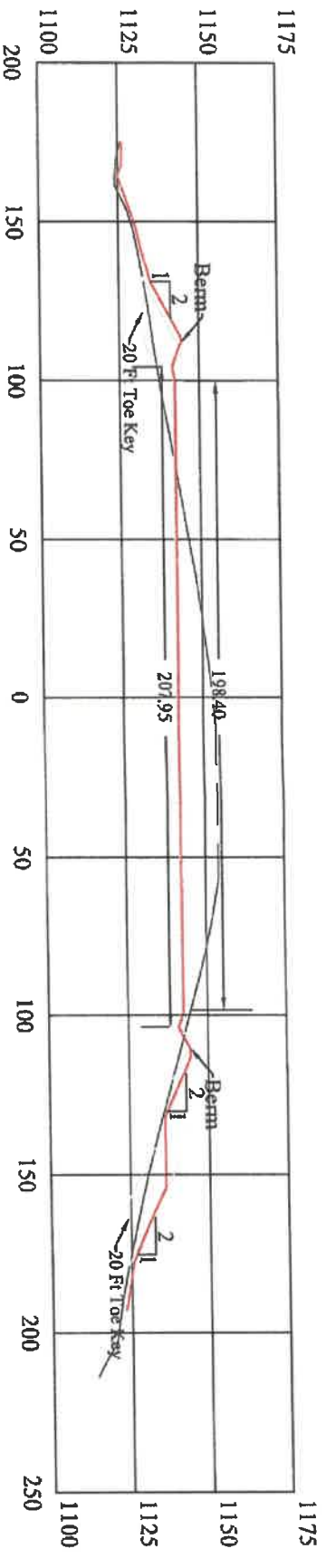
District: Union
 County: Ritchie
 State: West Virginia

Yolanda Pad Site As-Built Erosion and Sediment Control





05/31/2024



As-Built
Original Ground
Design

A Geotechnical Engineering Study Was Not Performed For The Purpose of This Design

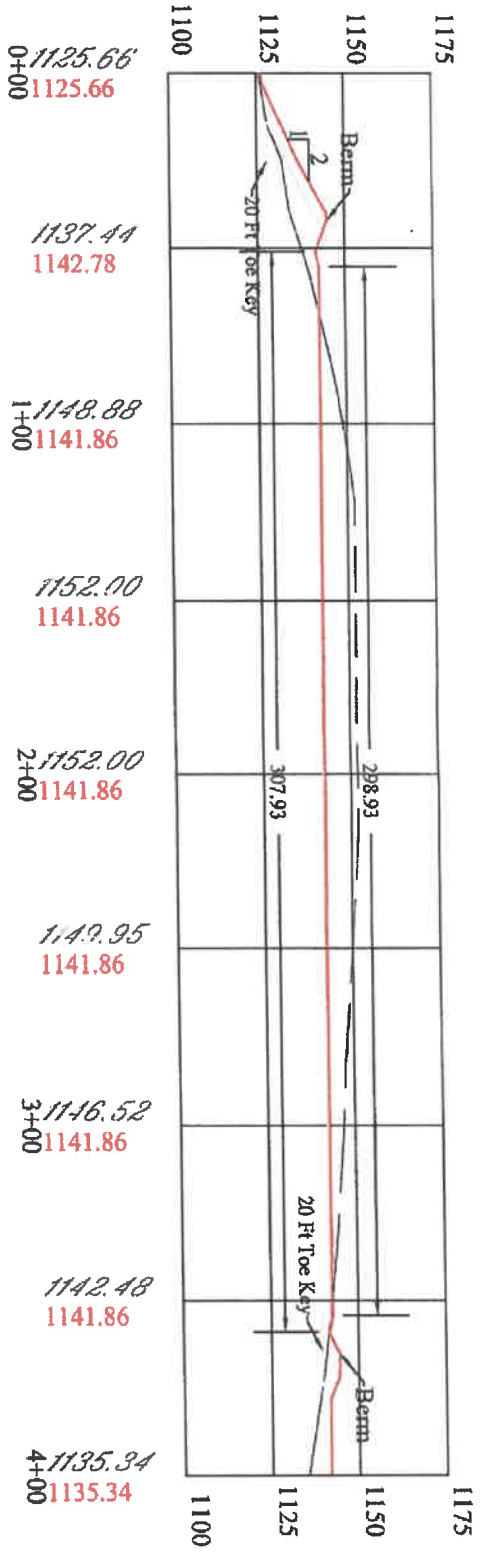


District: Union
County: Ritchie
State: West Virginia

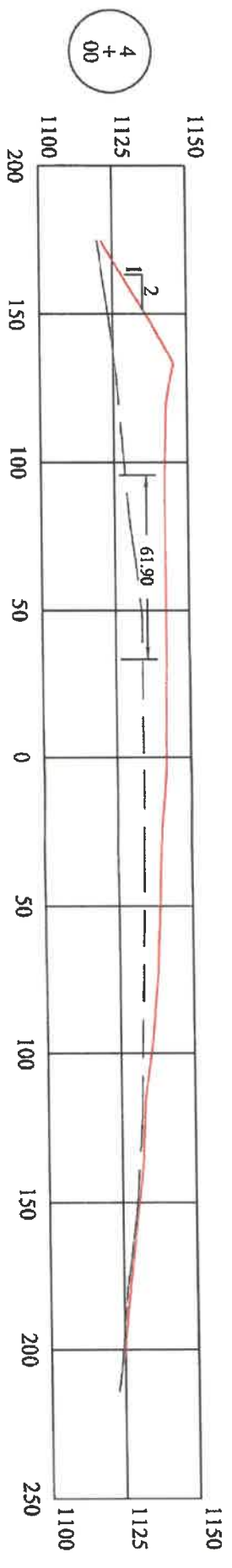
Yolanda Well Pad Site Cross Sections 0+00 - 3+00



05/31/2024



Well Pad Profile



As-Built
Original Ground
Design

A Geotechnical Engineering Study Was Not Performed For The Purpose of This Design

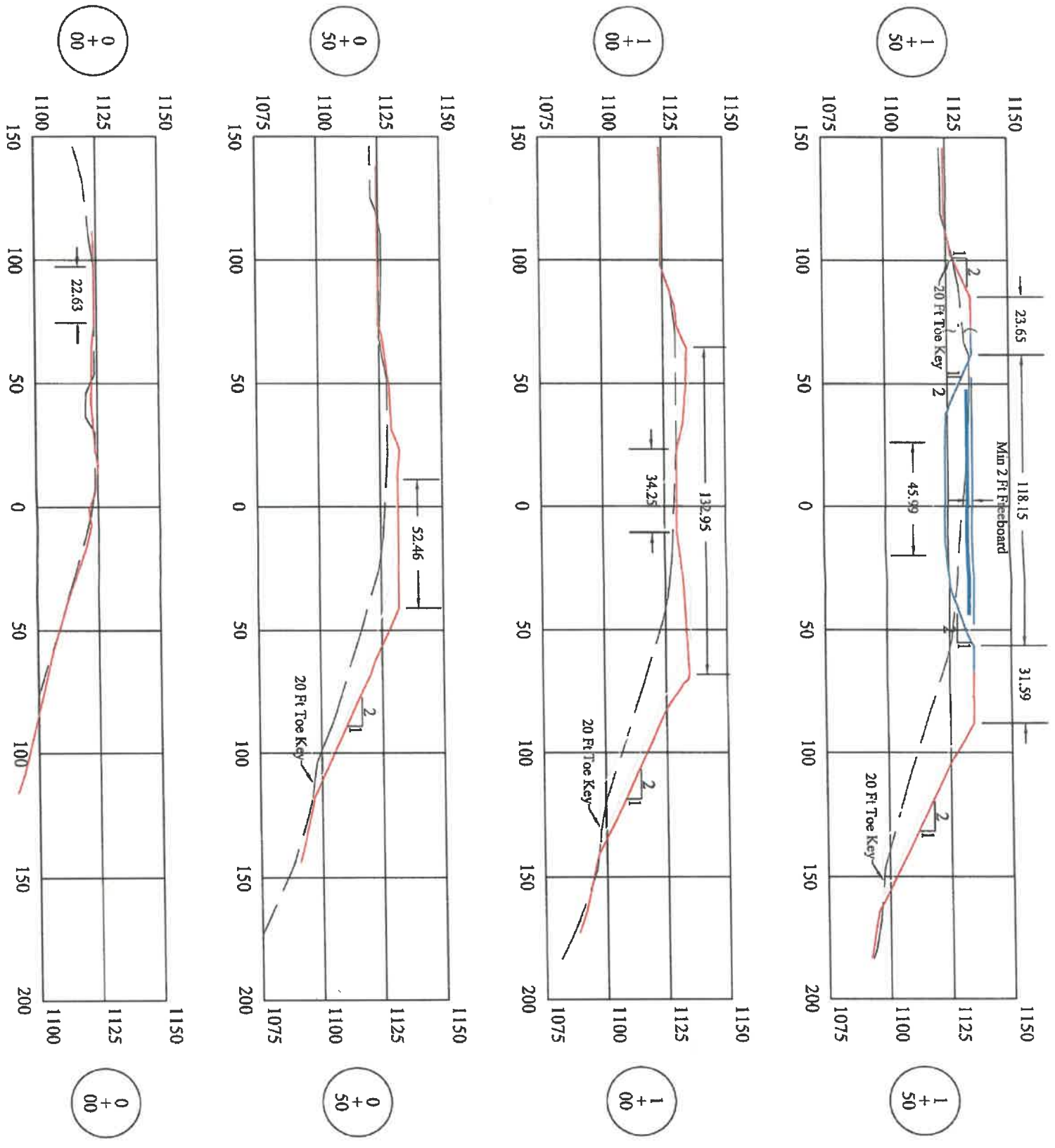


District: Union
County: Ritchie
State: West Virginia

Yolanda Well Pad Site Cross Sections 4+00



05/31/2024



— As-Built
 - - - Original Ground
 - - - Design
 — Water Level

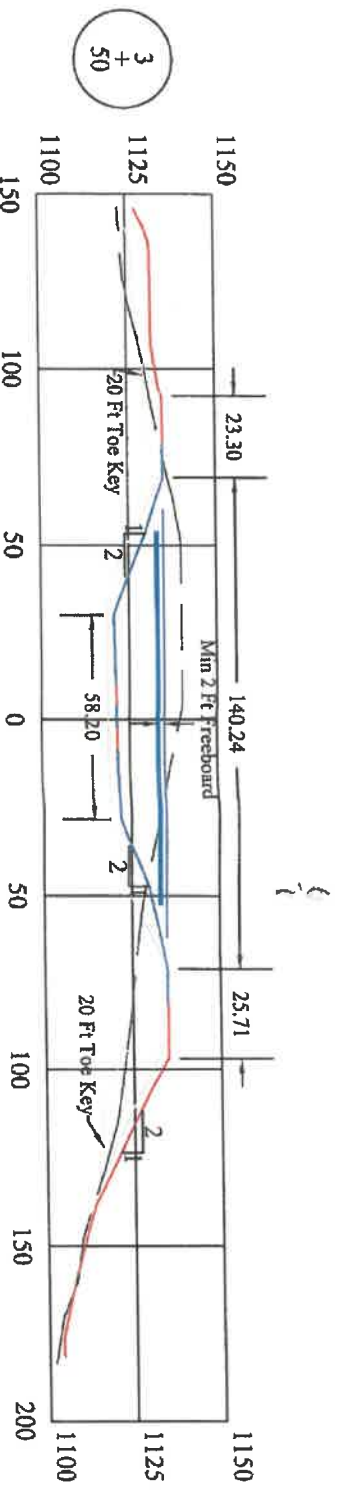
A Geotechnical Engineering Study Was Not Performed For The Purpose of This Design

Kelly Surviving
 201 S. King Street
 Charleston, West Virginia
 25301-1000

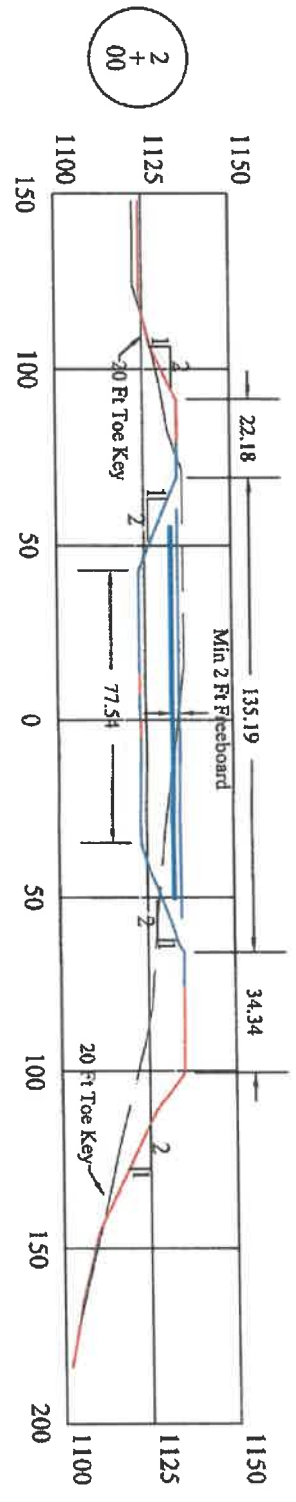
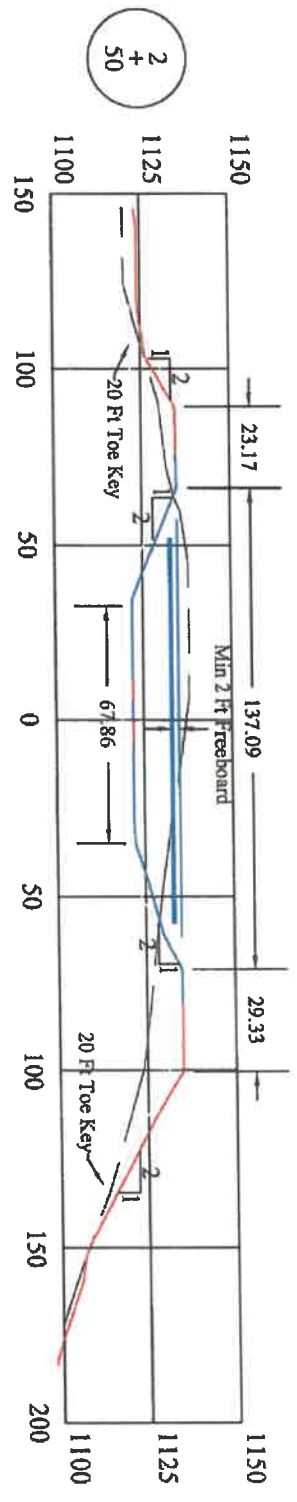
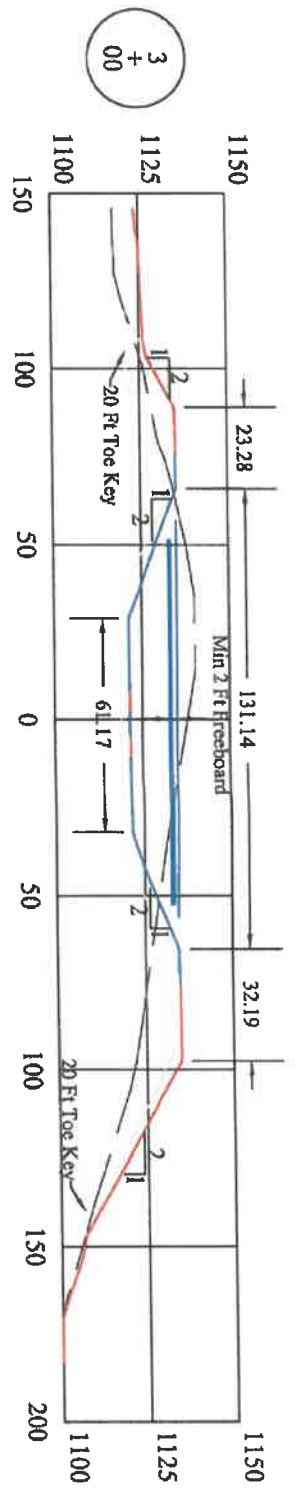
District: Union
 County: Ritchie
 State: West Virginia

Yolanda Well Pad Site Frac Pit Cross Sections 0+00 - 1+50





05/31/2024



— As-Built
 - - - Original Ground
 — Design
 — Water Level

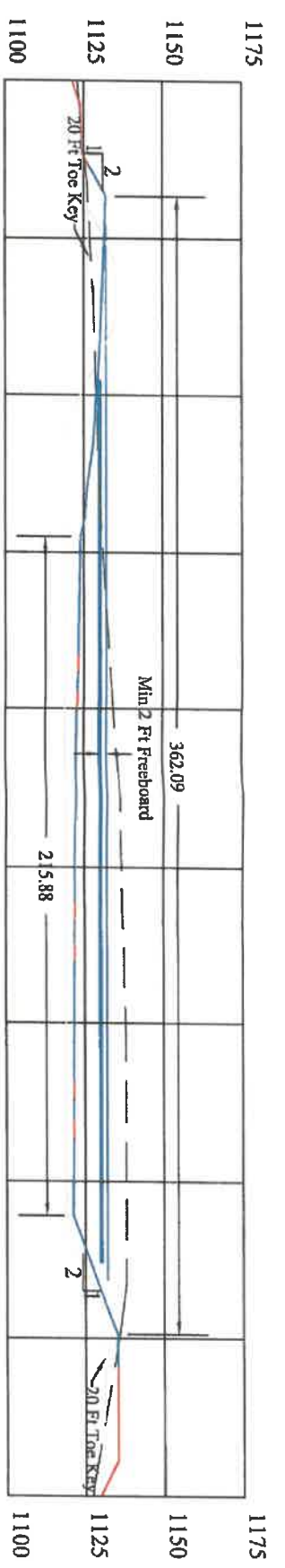
A Geotechnical Engineering Study Was Not Performed For The Purpose of This Design



District: Union
 County: Ritchie
 State: West Virginia

Yolanda Well Pad Site Frac Pit Cross Sections 2+00 - 3+50

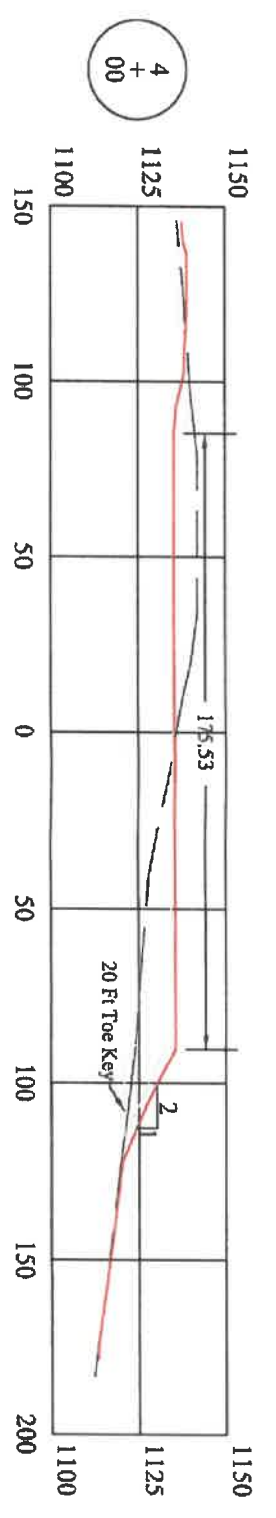
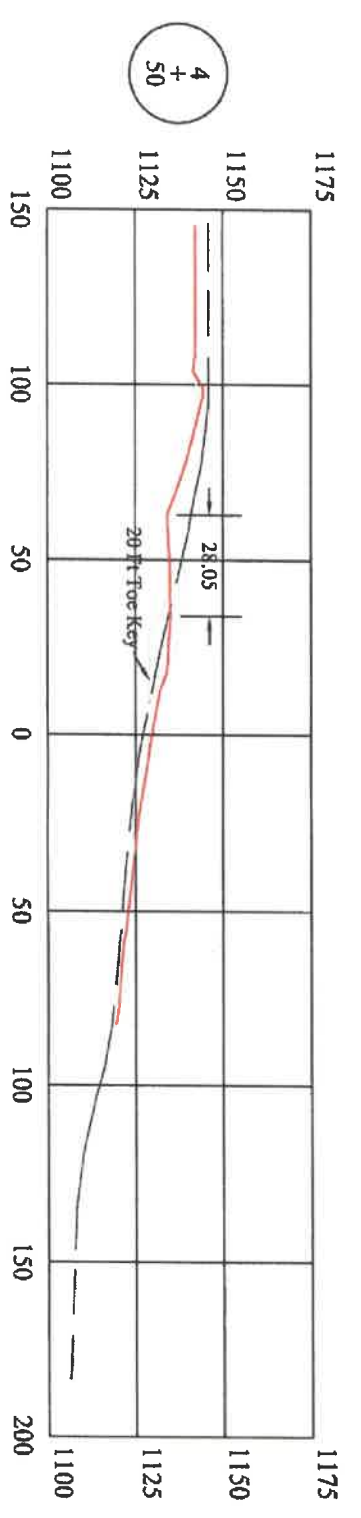




| Station | As-Built | Original Ground | Design | Water Level |
|---------|----------|-----------------|---------|-------------|
| 0+00 | 1122.94 | 1122.94 | 1136.95 | 1131.31 |
| 1+00 | 1128.94 | 1123.91 | 1131.00 | 1119.00 |
| 2+00 | 1134.56 | 1119.00 | 1136.67 | 1119.00 |
| 3+00 | 1137.90 | 1119.00 | 1138.00 | 1119.00 |
| 4+00 | 1135.67 | 1135.00 | 1127.14 | 1127.14 |

Frac Pit Profile

05/31/2024



As-Built
Original Ground
Design
Water Level

A Geotechnical Engineering Study Was Not Performed For The Purpose of This Design

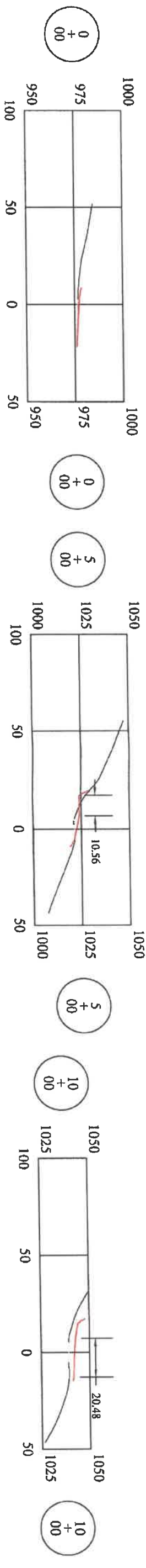
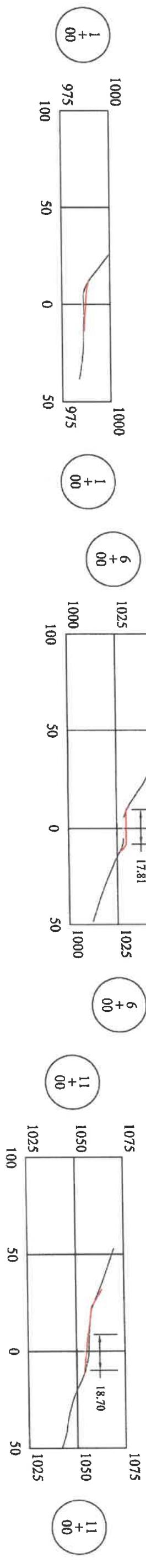
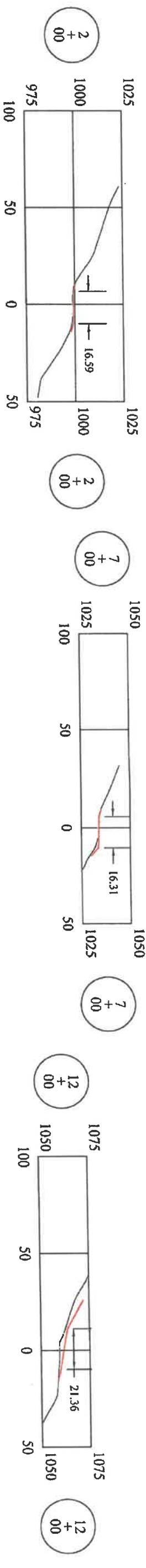
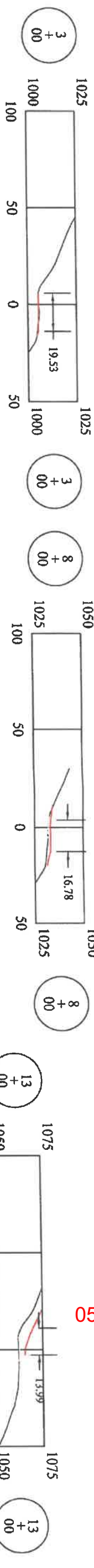
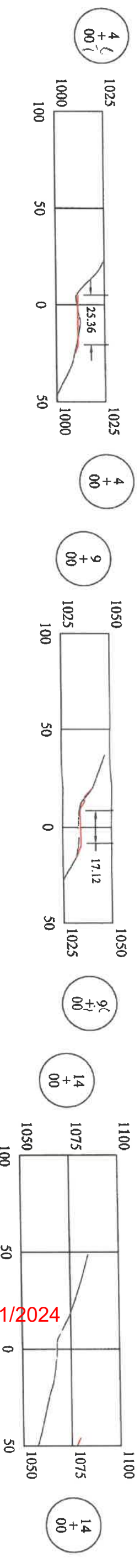


District: Union
County: Ritchie
State: West Virginia

Yolanda Well Pad Site Frac Pit Cross Sections 4+00 - 4+50



| | |
|-----------------------|----------------|
| Project Site | Sheet 15 of 20 |
| Yolanda Well Pad Site | |
| District | Union |
| County | Ritchie |
| State | W.V. |



As-Built
Original Ground
Design

A Geotechnical Engineering Study Was Not Performed For The Purpose of This Design



Kelly S Surveying
P.O. Box 274
17825
Georgetown, WV

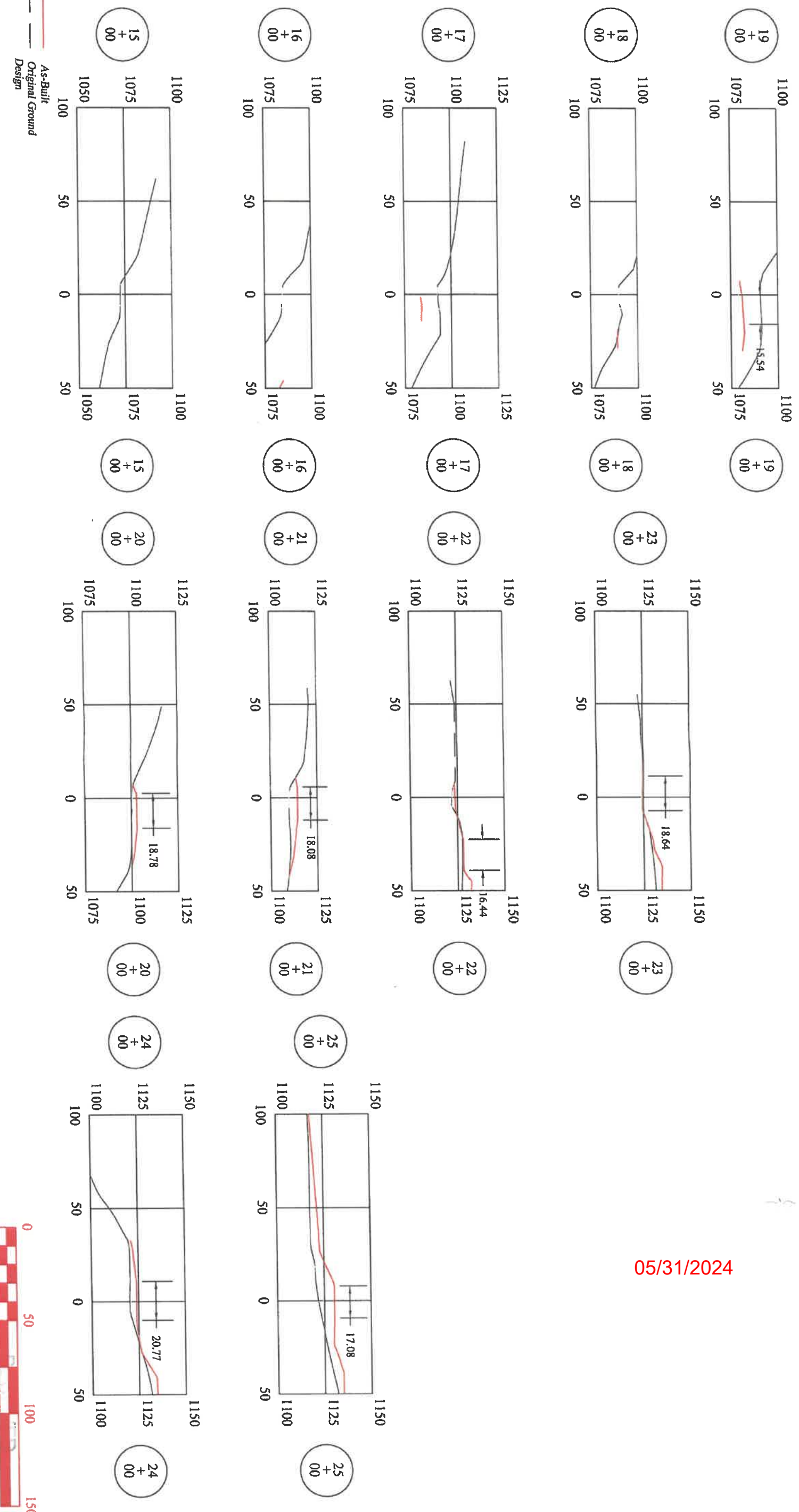
District: Union
County: Ritchie
State: West Virginia

Yolanda Well Pad Site Access Road Cross Sections 0+00 - 14+00

ANTERO RESOURCES

DATE: 05/31/2024

05/31/2024



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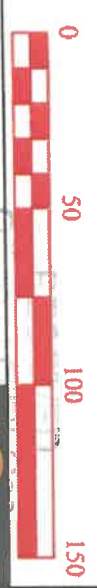
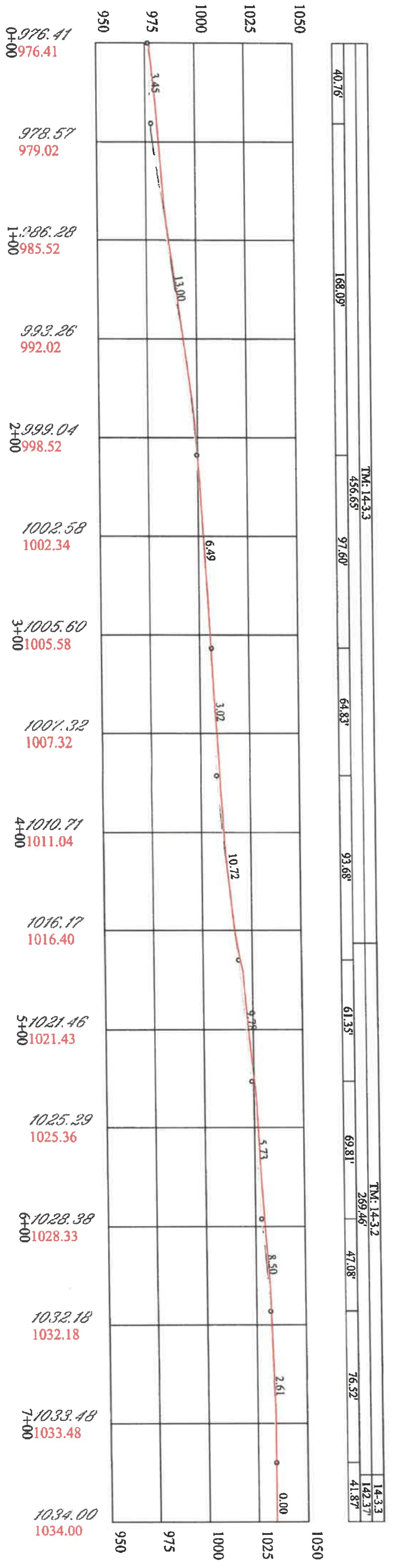
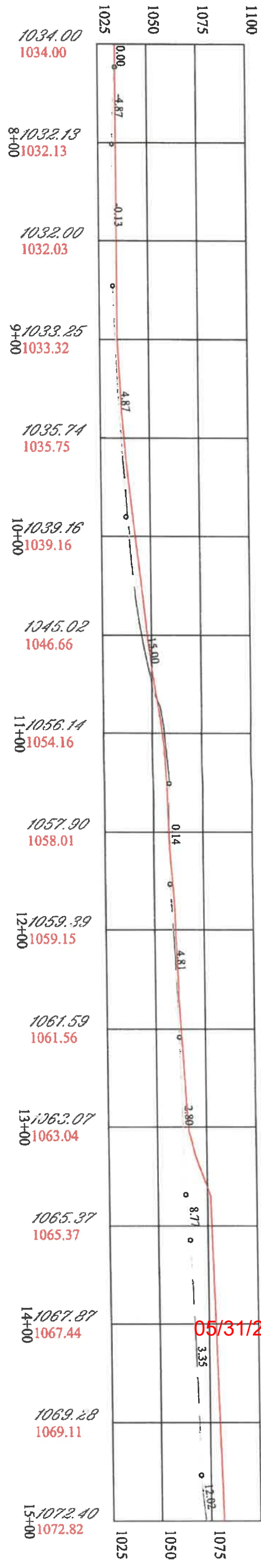


District: Union
 County: Ritchie
 State: West Virginia

Yolanda Well Pad Site Access Road Cross Sections 15+00 - 25+00



| | | | | | | |
|------------|------------|------------|------------|------------|------------|----------|
| TM: 14-3-3 | TM: 14-3-2 | TM: 14-3-3 | TM: 14-3-2 | TM: 14-3-3 | TM: 14-3-2 | TM: 9-21 |
| 142.37' | 182.24' | 149.14' | 145.01' | 269.46' | 142.37' | 385.31' |
| 39.23' | 72.13' | 117.43' | 35.03' | 64.83' | 93.68' | 119.39' |
| 41.87' | | | | | | |
| | | | | | | 116.43' |



As-Built
Original Ground
Design

A Geotechnical Engineering Study Was Not Performed For The Purpose of This Design

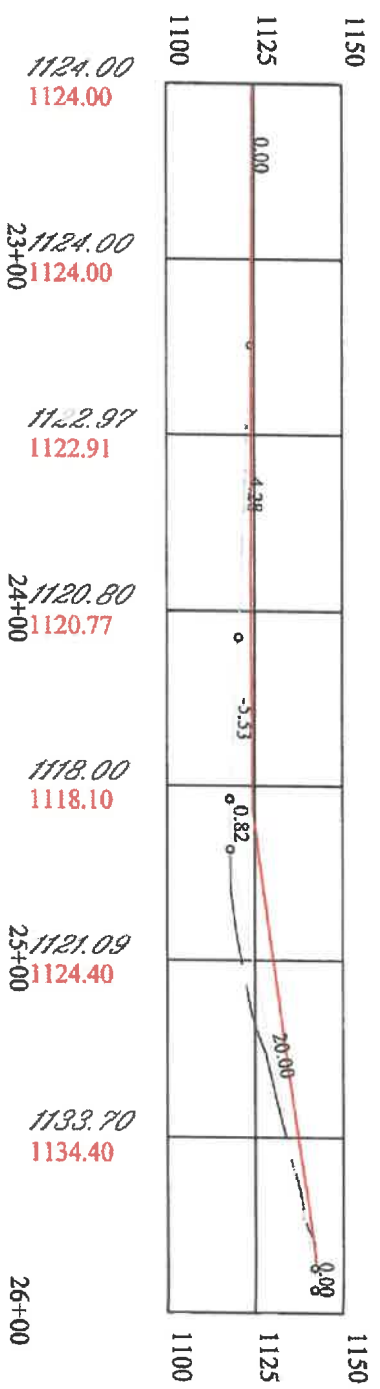


District: Union
County: Ritchie
State: West Virginia

Yolanda Well Pad Site Access Road Profile

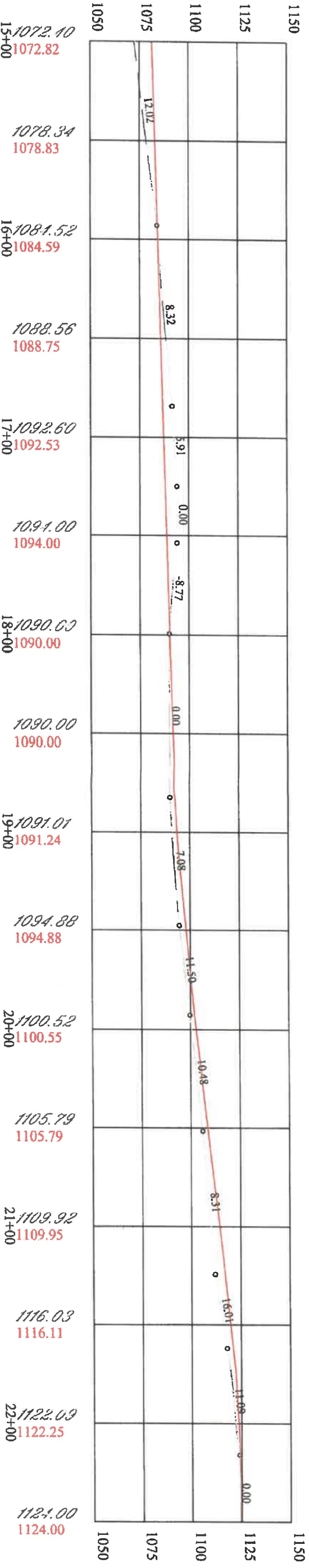


| | | | | | | |
|-------------|---------|--------|--------|--------|---------|--------|
| TM: 14-11.4 | 281.29' | 83.01' | 46.50' | 13.93' | 119.32' | 81.96' |
| TM: 14-3.2 | | | | | | 6.55' |



05/31/2024

| | | | | | | | | | | | | | | |
|----------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| TM: 9-21 | 385.31' | 91.32' | 40.67' | 28.87' | 45.59' | 83.10' | 65.17' | 44.74' | 59.18' | 72.70' | 37.70' | 53.78' | 14-3.2 | 14-11.4 |
| | | | | | | | | | | | | | 19.21' | 281.29' |
| | | | | | | | | | | | | | | 108.77' |



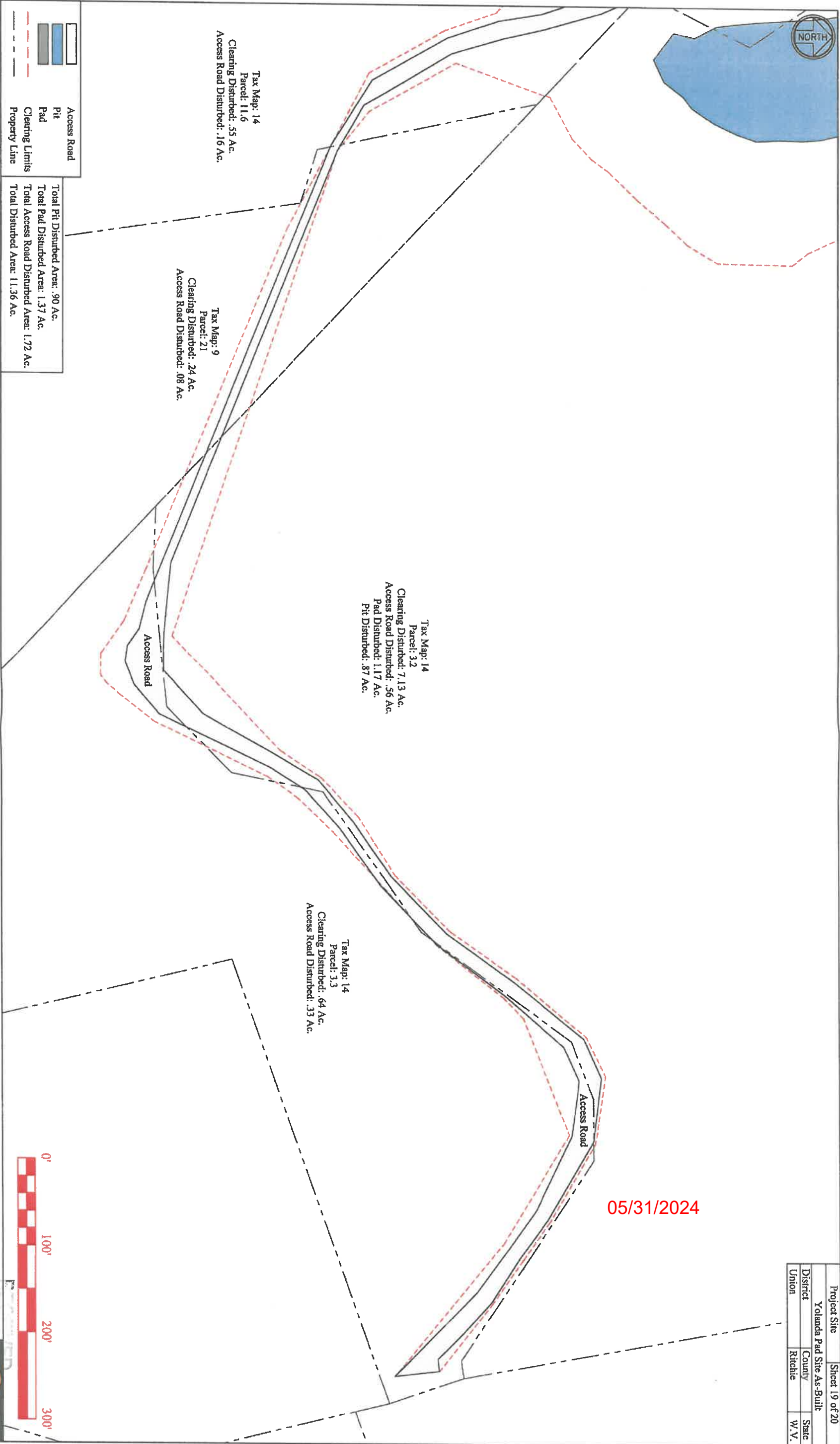
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District: Union
County: Ritchie
State: West Virginia

Yolanda Well Pad Site Access Road Profile





| | |
|---------------------------|----------------|
| Project Site | Sheet 19 of 20 |
| Yolanda Pad Site As-Built | |
| District | County |
| Union | Ritchie |
| | State |
| | W. V. |



District: Union
County: Ritchie
State: West Virginia

Yolanda Pad Site As-Built Disturbed Area

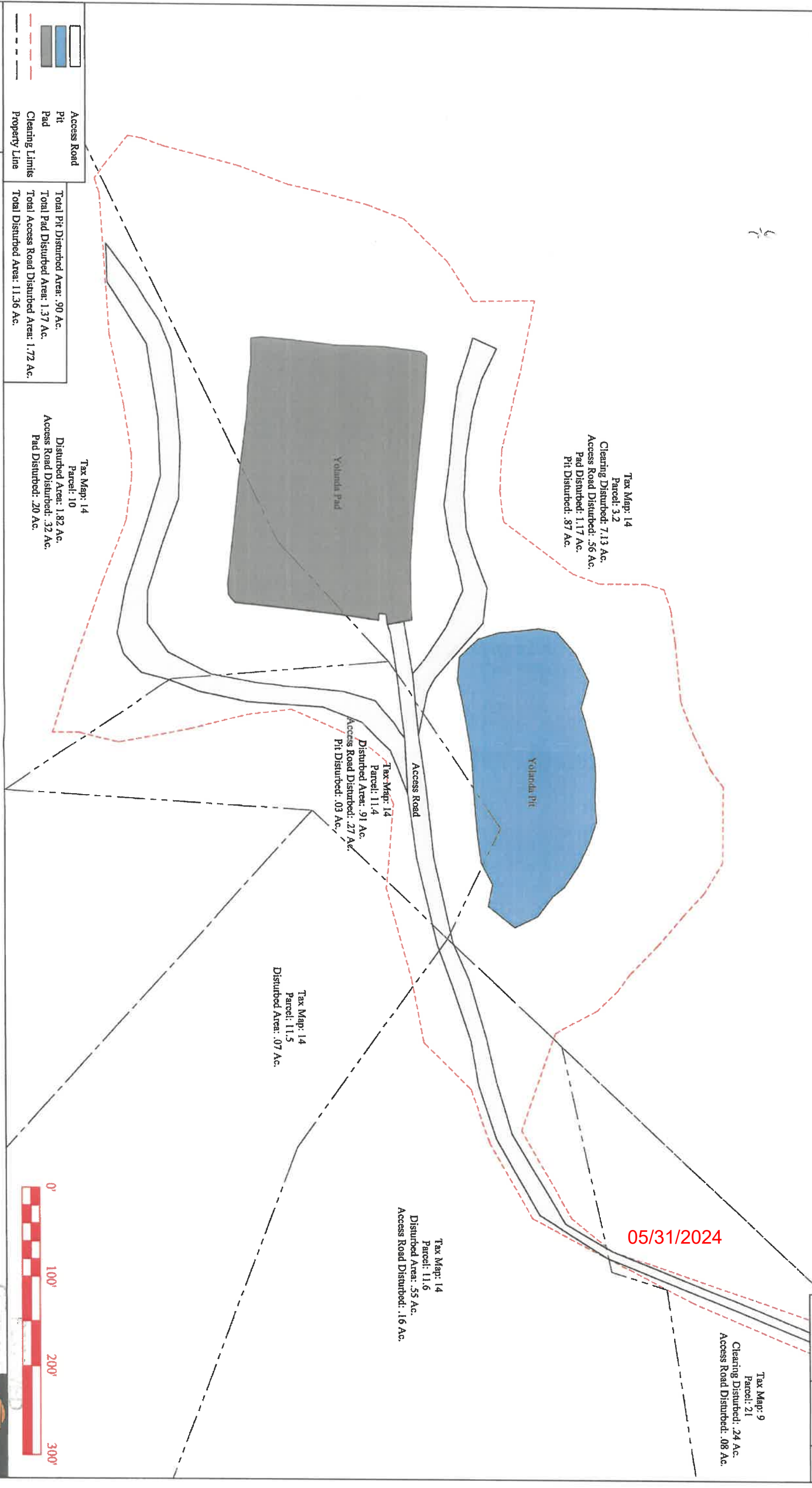
Office of
JAN 28
ANTERO
RESOURCES

Prepared for
E. ...



| | |
|---------------------------|----------------|
| Project Site | Sheet 20 of 20 |
| Yolanda Pad Site As-Built | |
| District | County |
| Union | Ritchie |
| | State |
| | W.V. |

05/31/2024



| | |
|-----------------|--|
| Access Road | Total Pit Disturbed Area: .90 Ac. |
| Pit | Total Pad Disturbed Area: 1.37 Ac. |
| Pad | Total Access Road Disturbed Area: 1.72 Ac. |
| Clearing Limits | Total Disturbed Area: 11.36 Ac. |
| Property Line | |

Tax Map: 14
Parcel: 10
Disturbed Area: 1.82 Ac.
Access Road Disturbed: .32 Ac.
Pad Disturbed: .20 Ac.

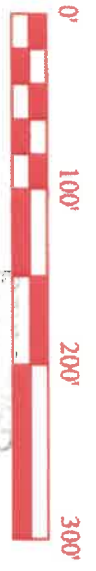
Tax Map: 14
Parcel: 3.2
Clearing Disturbed: 7.13 Ac.
Access Road Disturbed: .56 Ac.
Pad Disturbed: 1.17 Ac.
Pit Disturbed: .87 Ac.

Tax Map: 14
Parcel: 11.4
Disturbed Area: .91 Ac.
Access Road Disturbed: .27 Ac.
Pit Disturbed: .03 Ac.

Tax Map: 14
Parcel: 11.5
Disturbed Area: .07 Ac.

Tax Map: 14
Parcel: 11.6
Disturbed Area: .55 Ac.
Access Road Disturbed: .16 Ac.

Tax Map: 9
Parcel: 21
Clearing Disturbed: .24 Ac.
Access Road Disturbed: .08 Ac.



District: Union
County: Ritchie
State: West Virginia

Yolanda Pad Site As-Built Disturbed Area



DATE: 05/31/2024
PROJECT: YOLANDA PAD SITE AS-BUILT DISTURBED AREA
SHEET: 20 OF 20