

WW-6B
(04/15)

Permit Modification API# 47-085-10320
API NO. 47-085 - 10320 **11/16/2018**
OPERATOR WELL NO. Goliad Unit 1H
Well Pad Name: Weekley Trust

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

1) Well Operator: Antero Resources Corporation 494507062 085 - Ritchie Clay Pennsboro 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Goliad Unit 1H Well Pad Name: Weekley Trust

3) Farm Name/Surface Owner: David L. Weekley Public Road Access: CR 74-2

4) Elevation, current ground: 1235' Elevation, proposed post-construction: _____

5) Well Type (a) Gas Oil _____ Underground Storage _____
Other _____
(b) If Gas Shallow Deep _____
Horizontal

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus Shale: 7000' TVD, Anticipated Thickness- 75 feet, Associated Pressure- 2800#

8) Proposed Total Vertical Depth: 7000' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 17700' MD

11) Proposed Horizontal Leg Length: 9956'

12) Approximate Fresh Water Strata Depths: 338', 375'

13) Method to Determine Fresh Water Depths: Offset well records. Depths have been adjusted according to surface elevations.

14) Approximate Saltwater Depths: None Identified

15) Approximate Coal Seam Depths: 887'

16) Approximate Depth to Possible Void (coal mine, karst, other): None Anticipated

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes _____ No

(a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

VOID

RECEIVED
Office of Oil and Gas

AUG 6 2018

WW-6B
(04/15)

Permit Modification API# 47-085-10320
 API NO. 47- 085 - 10320 **11/16/2018**
 OPERATOR WELL NO. Goliad Unit 1H
 Well Pad Name: Weekley Trust

18)

CASING AND TUBING PROGRAM

TYPE	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft.)/CTS</u>
Conductor	20"	New	H-40	94#	80	80	CTS, 77 Cu. Ft.
Fresh Water	13-3/8"	New	J-55	54.5#	425 *see # 19	425 *see # 19	CTS, 590 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	2500	2500	CTS, 1018 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110	23#	17700	17700	4460 Cu. Ft
Tubing	2-3/8"	New	N-80	4.7#			
Liners							

TYPE	<u>Size (in)</u>	<u>Wellbore Diameter (in)</u>	<u>Wall Thickness (in)</u>	<u>Burst Pressure (psi)</u>	<u>Anticipated Max. Internal Pressure (psi)</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
Conductor	20"	24"	0.438"	1530	50	Class A	~1.18
Fresh Water	13-3/8"	17-1/2"	0.38"	2730	1000	Class A	~1.18
Coal	9-5/8"	12-1/4"	0.352"	3520	1500	Class A	~1.18
Intermediate							
Production	5-1/2"	8-3/4" & 8-1/2"	0.415"	12,630	2500	Lead-H/POZ & Tail - H	H/POZ-1.44 & H-1.8
Tubing	2-3/8"	4.778"	0.19"	11,200			
Liners							



PACKERS

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

RECEIVED
Office of Oil and Gas

AUG 6 2018

WV Department of
Environmental Protection

WW-6B
(10/14)

Permit Modification API# 47-085-10320
API NO. 47- 085 - 10320 **11/16/2018**
OPERATOR WELL NO. Gollad Unit 1H
Well Pad Name: Weekley Trust

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill, perforate, fracture a new horizontal shallow well and complete Marcellus Shale.

*Antero will be air drilling the fresh water string which makes it difficult to determine when fresh water is encountered. Therefore, we have built in a buffer for the casing setting depth which helps to ensure that all fresh water zones are covered.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

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."

Anticipated Max Pressure - 9300 lbs

Anticipated Max Rate - 80 bpm

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): Existing 32.87 acres

22) Area to be disturbed for well pad only, less access road (acres): Existing 8.15 acres

23) 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.

24) Describe all cement additives associated with each cement type:

Conductor: no additives, Class A cement.

Surface: Class A cement with 2-3% calcium chloride and 1/4 lb of flake

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

VOID

25) 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.

RECEIVED
Office of Oil and Gas

AUG 6 2018

Page 3 of 3

WV Department of
Environmental Protection

LATITUDE 39°22'30" 2,013'

LATITUDE 39°22'30"

10,194' TO BOTTOM HOLE

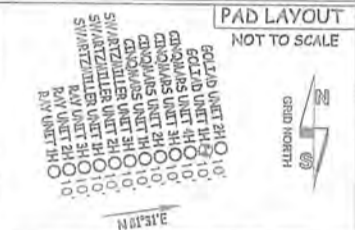
LONGITUDE 80°55'00"

10,58' TO BOTTOM HOLE

Antero Resources Corporation
Well No. Goliad Unit 1H
47-085-10320

NOTES:
WELL 1H TOP HOLE INFORMATION:
N: 320,643ft E: 1,597,501ft
IH TOP HOLE
LAT: 39°22'17.75" LON: 80°55'25.64"
BOTTOM HOLE INFORMATION:
N: 311,240ft E: 1,600,957ft
LAT: 39°20'45.36" LON: 80°54'39.76"
WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT 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 1H TOP HOLE INFORMATION:
N: 4,358,026m E: 506,579m
BOTTOM HOLE INFORMATION:
N: 4,355,179m E: 507,680m

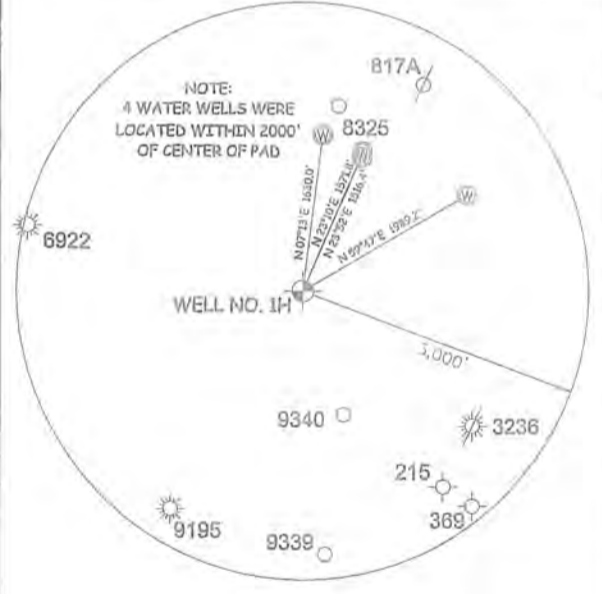


(NAD) 27 (UTM) ZONE 17 COORDS:
WELL 1H TOP HOLE INFORMATION:
N: 14,297,243ft E: 1,661,955ft
POINT OF ENTRY INFORMATION:
N: 14,297,270ft E: 1,662,202ft
BOTTOM HOLE INFORMATION:
N: 14,287,903ft E: 1,665,565ft

JOB # 16-051WA
DRAWING # GOLIAD1HR
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS
STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

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

DOUGLAS R. ROWE P.S. 2202
DATE 07/30/18



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 RULES ISSUED AND PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

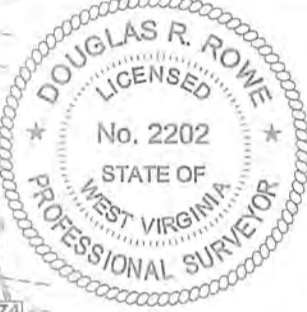


STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WILLOW LAND SURVEYING PLLC
220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

REFERENCES



WELL TYPE: OIL	GAS <input checked="" type="checkbox"/>	LIQUID INJECTION	WASTE DISPOSAL	OPERATOR'S WELL#	GOLIAD UNIT #1H	COUNTY
(IF "GAS") PRODUCTION	STORAGE	DEEP	SHALLOW <input checked="" type="checkbox"/>	47	085	RITCHIE
LOCATION: ELEVATION 1,235'-AS BUILT	WATERSHED NORTH FORK HUGHES RIVER	DISTRICT CLAY	COUNTY RITCHIE	PERMIT		
SURFACE OWNER DAVID L. WEEKLY REVOCABLE TRUST	ACREAGE 203.38 ACRES +/-					
OIL & GAS ROYALTY OWNER DAVID L. WEEKLY REVOCABLE TRUST; EDWARD T. CLISSOLD;	LEASE ACREAGE 229 AC±; 22.5 AC±;					
HELEN MCCULLOUGH; EMERSON MCCULLOUGH ET AL; CARL LEE RIDGEWAY ET UX; ROBERT MCCULLOUGH	103 AC±; 154 AC±; 22.5 AC±; 148.5 AC±					
PROPOSED WORK: DRILL	CONVERT	DRILL DEEPER <input checked="" type="checkbox"/>	REDRILL	FRACTURE OR STIMULATE <input checked="" type="checkbox"/>		
PLUG OFF OLD FORMATION	PERFORATE NEW FORMATION <input checked="" type="checkbox"/>	OTHER PHYSICAL CHANGE IN WELL (SPECIFY) MOD BHL	PLUG & ABANDON	CLEAN OUT & REPLUG		
TARGET FORMATION MARCELLUS	ESTIMATED DEPTH 7,000' TVD 17,700' MD					
WELL OPERATOR ANTERO RESOURCES CORP.	DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM					
ADDRESS 1615 WYNKOOP ST.	ADDRESS 5400 D BIG TYLER ROAD					
FORM WW-6	DENVER, CO 80202					



10 OCCURRED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER LIVESTOCK OR POULTRY (HENS) ONLY ARE LOCATED WITHIN ONE HUNDRED TWENTY-FIVE (125) FEET OF THE CENTER OF THE WELL PAD.

11/16/2018

11/16/2018

RECEIVED
Office of Oil and Gas

AUG 6 2018

WV Department of
Environmental Protection

WATER CONTAINMENT PAD & SEDIMENT CONTROL PLAN

RECEIVED
Office of Oil and Gas

AUG 6 2018

WV Department of
Environmental Protection

WEST VIRGINIA
RIVER WATERSHED
BORO QUAD MAPS



WEST VIRGINIA STATE PLANE COORDINATE SYSTEM
NORTH ZONE, NAD83
ELEVATION BASED ON NAVD83
ESTABLISHED BY SURVEY GRADE GPS & OPUS
POST-PROCESSING

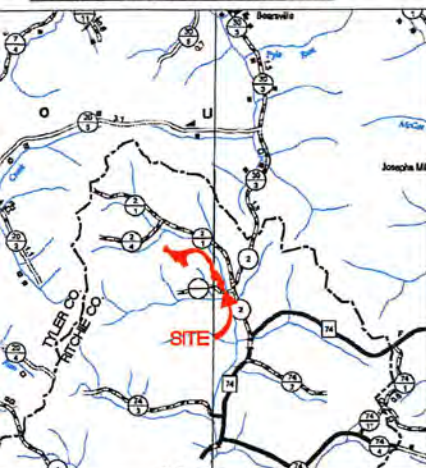
SHEET INDEX

- 1 - COVER SHEET
- 2 - LEGEND
- 3 - OVERALL PLAN SHEET INDEX
- 4 - ACCESS ROAD & WATER CONTAINMENT PAD AS-BUILT PLAN
- 5 - ACCESS ROAD AS-BUILT PLAN
- 6 - WELL PAD AS-BUILT PLAN
- 7 - ACCESS ROAD AS-BUILT PROFILE, WELL PAD & WATER CONTAINMENT PAD AS-BUILT SECTIONS
- 8 - ACCESS ROAD AS-BUILT PROFILE
- 9 - STOCKPILE AS-BUILT SECTIONS

WEEKLEY TRUST LIMITS OF DISTURBANCE AREA (AC)	
Total Site	
Impacts to David L. Weekley, Trustee of the David L. Weekley Revocable Trust UTA TM 3-10	
Access Road "A" (749')	2.72
Access Road "B" (2,486')	10.67
Well Pad	8.15
Water Containment Pad	3.70
Excess/Topsoil Material Stockpiles	7.63
Total Affected Area	32.87
Total Wooded Acres Disturbed	30.22

Proposed Well Name	WV North NAD 27	WV North NAD 83	UTM (METERS) Zone 17	NAD 83 Lat & Long
Ray	N 320527.84	N 320662.16	N 4358020.94	LAT 39-22-17.8714
Unit 1H	E 1597402.38	E 1565961.32	E 506549.28	LONG -80-55-26.2802
Ray	N 320529.32	N 320663.64	N 4358021.44	LAT 39-22-17.8875
Unit 2H	E 1597412.28	E 1565971.21	E 506552.28	LONG -80-55-26.1546
Ray	N 320530.79	N 320665.11	N 4358021.94	LAT 39-22-17.9037
Unit 3H	E 1597422.17	E 1565981.10	E 506555.29	LONG -80-55-26.0290
Swartzmiller	N 320532.26	N 320666.59	N 4358022.44	LAT 39-22-17.9198
Unit 1H	E 1597432.06	E 1565990.99	E 506558.29	LONG -80-55-25.9033
Swartzmiller	N 320533.74	N 320668.06	N 4358022.94	LAT 39-22-17.9359
Unit 2H	E 1597441.95	E 1566000.88	E 506561.30	LONG -80-55-25.7777
Swartzmiller	N 320535.21	N 320669.54	N 4358023.44	LAT 39-22-17.9520
Unit 3H	E 1597451.84	E 1566010.77	E 506564.30	LONG -80-55-25.6520
Cinqmars	N 320536.69	N 320671.01	N 4358023.94	LAT 39-22-17.9682
Unit 1H	E 1597461.73	E 1566020.66	E 506567.31	LONG -80-55-25.5264
Cinqmars	N 320538.16	N 320672.49	N 4358024.44	LAT 39-22-17.9843
Unit 2H	E 1597471.62	E 1566030.55	E 506570.31	LONG -80-55-25.4008
Cinqmars	N 320539.64	N 320673.96	N 4358024.94	LAT 39-22-18.0004
Unit 3H	E 1597481.51	E 1566040.44	E 506573.32	LONG -80-55-25.2751
Cinqmars	N 320541.11	N 320675.44	N 4358025.44	LAT 39-22-18.0165
Unit 4H	E 1597491.40	E 1566050.33	E 506576.33	LONG -80-55-25.1495
Goliad	N 320542.59	N 320676.91	N 4358025.94	LAT 39-22-18.0327
Unit 1H	E 1597501.29	E 1566060.23	E 506579.33	LONG -80-55-25.0239
Goliad	N 320544.06	N 320678.38	N 4358026.44	LAT 39-22-18.0488
Unit 2H	E 1597511.18	E 1566070.12	E 506582.34	LONG -80-55-24.8992
Well Pad Elevation	1,235.0			

WVDOH COUNTY ROAD MAP



5000 0 5000
SCALE: 1" = 5000'

NOTES:

1. ALL BMP'S MUST REMAIN IN PLACE AND FUNCTIONAL UNTIL ALL AREAS WITHIN THE LIMIT OF DISTURBANCE ARE COMPLETE AND PERMANENTLY STABILIZED. MAINTENANCE MUST INCLUDE INSPECTION OF ALL EROSION AND SEDIMENT CONTROLS AFTER EACH RUNOFF EVENT IN EXCESS OF 0.5" AND ON A BIWEEKLY BASIS.
2. THE CONSTRUCTION SITE SHOULD BE STABILIZED AS SOON AS POSSIBLE AFTER COMPLETION. ESTABLISHMENT OF FINAL STABILIZATION MUST BE INITIATED NO LATER THAN 7 DAYS AFTER REACHING FINAL GRADE. FINAL STABILIZATION MEANS THAT ALL SOIL-DISTURBING ACTIVITIES ARE COMPLETED, AND THAT EITHER A PERMANENT VEGETATIVE COVER WITH A DENSITY OF 70% OR GREATER HAS BEEN ESTABLISHED OR THAT THE SURFACE HAS BEEN STABILIZED BY HARD COVER SUCH AS PAVEMENT OR BUILDINGS. IT SHOULD BE NOTED THAT THE 70% REQUIREMENT REFERS TO THE TOTAL AREA VEGETATED AND NOT JUST A PERCENT OF THE SITE.
3. ALL PERMANENT SEDIMENT CONTROL MEASURES CAN BE REMOVED AFTER THE SITE IS PERMANENTLY STABILIZED AND APPROVAL IS RECEIVED FROM THE WVDEP.
4. ANY AREAS DISTURBED BY REMOVAL OF CONTROLS SHALL BE REPAIRED, STABILIZED, AND PERMANENTLY SEEDED.
5. THE AS-BUILT INFORMATION SHOWN HEREON REFLECTS FIELD DATA COLLECTED RELATING TO THE FINAL GRADING OF THE DISTURBED AREA AS OF MARCH 5, 2018. NAVITUS ENGINEERING IS NOT RESPONSIBLE FOR ANY CHANGES MADE TO THE SITE AFTER THE ABOVE MENTIONED DATES.
6. THE EXISTING CONTAINMENT BERM AROUND THE WELL PAD SHALL BE REPAIRED AS NECESSARY TO ENSURE 100% CONTAINMENT OF ALL FLUIDS PRIOR TO DRILLING OPERATIONS
7. THE EXISTING EGRESSES TO THE WELL PAD SHALL HAVE THE MOUNTABLE BERMS REPAIRED AS NECESSARY TO ENSURE 100% CONTAINMENT OF ALL FLUIDS PRIOR TO DRILLING OPERATIONS.

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!!

NAVITUS
ENERGY ENGINEERING

Telephone: (888) 662-4185 | www.NavitusEng.com

REVISION

DATE



THIS DOCUMENT
WAS PREPARED FOR:
ANTERO RESOURCES
CORPORATION

COVER SHEET

WEEKLEY TRUST
WELL PAD & WATER CONTAINMENT PAD
CLAY DISTRICT
RITCHIE COUNTY, WEST VIRGINIA



DATE: 03/05/2018

SCALE: AS SHOWN

SHEET 1 OF 9

LEGEND

LEGEND		
EX. INDEX CONTOUR & CONTOUR LABEL		PR. INDEX CONTOUR
EX. INTERMEDIATE CONTOUR		PR. INTERMEDIATE
EX. PROPERTY LINE		PR. INTERMEDIATE
EX. TOP OF BERM		PR. INDEX ROAD C
EX. ROAD EDGE OF GRAVEL/DIRT		PR. INTERMEDIATE
EX. ROAD EDGE OF PAVEMENT		PR. PADS/STOCKPI
EX. ROAD CENTERLINE		PERMITTED LIMITS
EX. GUARDRAIL		MODIFICATION LIMIT
EX. BRIDGE		PR. ROAD/IMPOUN
EX. DITCHLINE/DRAINAGE FEATURE		PR. ROAD CENTER
EX. RIP-RAP		PR. GUARDRAIL
EX. CULVERT		PR. ROCK CONSTR
EX. TREELINE		PR. AIR BRIDGE
EX. BUILDING		PR. CULVERT
EX. MISCELLANEOUS FEATURE		PR. DITCH
EX. 100 YR FEMA FLOODPLAIN		PR. RIP-RAP TRAE
EX. DELINEATED STREAM		PR. OUTLET PROT
EX. DELINEATED WETLAND/POND		PR. DIVERSION
100' WETLAND/STREAM BUFFER		PR. ROCK LEVEL 5
STREAM/WETLAND DELINEATION STUDY AREA		PR. COMPOST FILT
EX. FENCELINE		PR. SUPER SILT F
EX. GATE		PR. WELL HEAD
EX. PERIMETER SAFETY FENCE		PR. PAD DEWATER
EX. ACCESS GATE WITH EMERGENCY LIFELINE		PR. TOP OF PAD
EX. WELL HEAD ON DESIGNED PAD		PR. 220' X 320' F
EX. GAS WELL		PR. SPOT SHOT
EX. PIPELINE		PR. PERIMETER SA
EX. PIPELINE R/W		PR. ACCESS GATE
EX. PIPELINE METER		PR. PIPELINE
EX. PIPELINE VALVE		PR. PIPELINE R/W
EX. PIT		PR. OVERHEAD UT
EX. OVERHEAD UTILITY		PR. POWER POLE/A
EX. POWER POLE/GUY WIRE		PR. OVERHEAD UT
EX. UNDERGROUND ELECTRIC		PR. WATERLINE
EX. UNDERGROUND TELEPHONE		BORING LOCATION
EX. UNDERGROUND FIBER OPTIC		X-SECTION/PROFI
EX. UTILITY R/W		X-SECTION/PROFI
EX. WATERLINE		X-SECTION/PROFI
EX. WATER WELL/EX. SPRING		X-SECTION/PROFI
EX. COMPOST SOCK		X-SECTION/PROFI
EX. SUPER SILT FENCE		X-SECTION/PROFI
EX. SILT FENCE		MATCHLINE
APPROX. LOCATION OF SLIDE AREA		EX. METER
APPROX. LOCATION OF BORROW/ SPOIL AREA		EX. TANK
PR. TOE BENCH		EX. COMBUSTOR
EX. APPROX. SURFACE & SUB-SURFACE ELECTRIC LINE AREA		EX. GPU
EX. APPROX. SURFACE & SUB-SURFACE DUMP LINE AREA		EX. SEPARATOR
EX. APPROX. SURFACE & SUB-SURFACE WELL LINE AREA		EX. VRT
EX. APPROX. SURFACE & SUB-SURFACE SALES LINE AREA		EX. KNOCK-OUT



CONTOUR (10' INTERVAL) & CONTOUR LABEL	
CONTOUR (2' INTERVAL)	
CONTOUR (1' INTERVAL)	
CONTOUR (10' INTERVAL) & CONTOUR LABEL	
ROAD CONTOUR (2' INTERVAL)	
TOPO LIMITS	
TYPE I DISTURBANCE	
TYPE II DISTURBANCE	
PERMANENT EDGE OF GRAVEL	
TOPO	
SECTION ENTRANCE	
CLAY #1	
DL #1	
OP #1	
DIV #1	
SPREADER	
R SOCK	
SSP	
PUMP SYSTEM	
CONTAINMENT BERM	
ROAD FOOTPRINT	
SAFETY FENCE	
FENCE WITH EMERGENCY LIFELINE	
UTILITY	
UTILITY WIRE	
UTILITY R/W	
PROPERTY	
GRID INDEX	
GRID INTERMEDIATE	
PROPOSED GRADE	
EXISTING GRADE	
WATER SURFACE	
CULVERT	
EX. STAIRS/CATWALK	
EX. DEWATERING SYSTEM	
EX. PIG LAUNCHER	
EX. SECONDARY CONTAINMENT	
EX. ABOVE-GND VAPOR LINE	
EX. ESD	
EX. MAILBOX	
EX. CONTROL PT.	
EX. MUSTER AREA	

DATE	REVISION



LEGEND

WEEKLEY TRUST
WELL PAD & WATER CONTAINMENT PAD
CLAY DISTRICT
RITCHIE COUNTY, WEST VIRGINIA

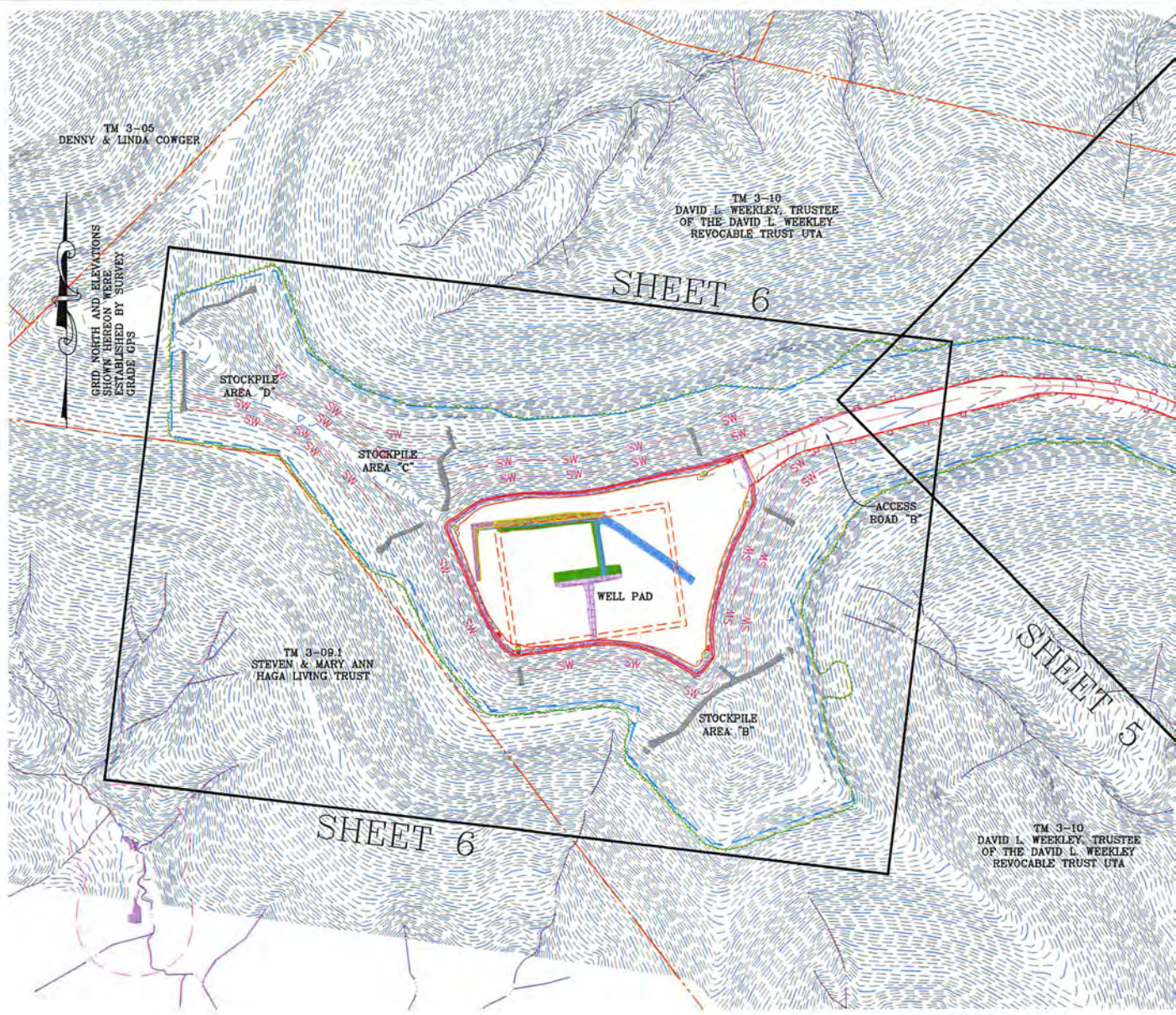


RECEIVED
Office of Oil and Gas

AUG 6 2018

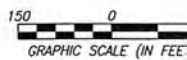
WV Department of Environmental Protection

DATE: 03/05/2018
SCALE: N/A
SHEET 2 OF 9

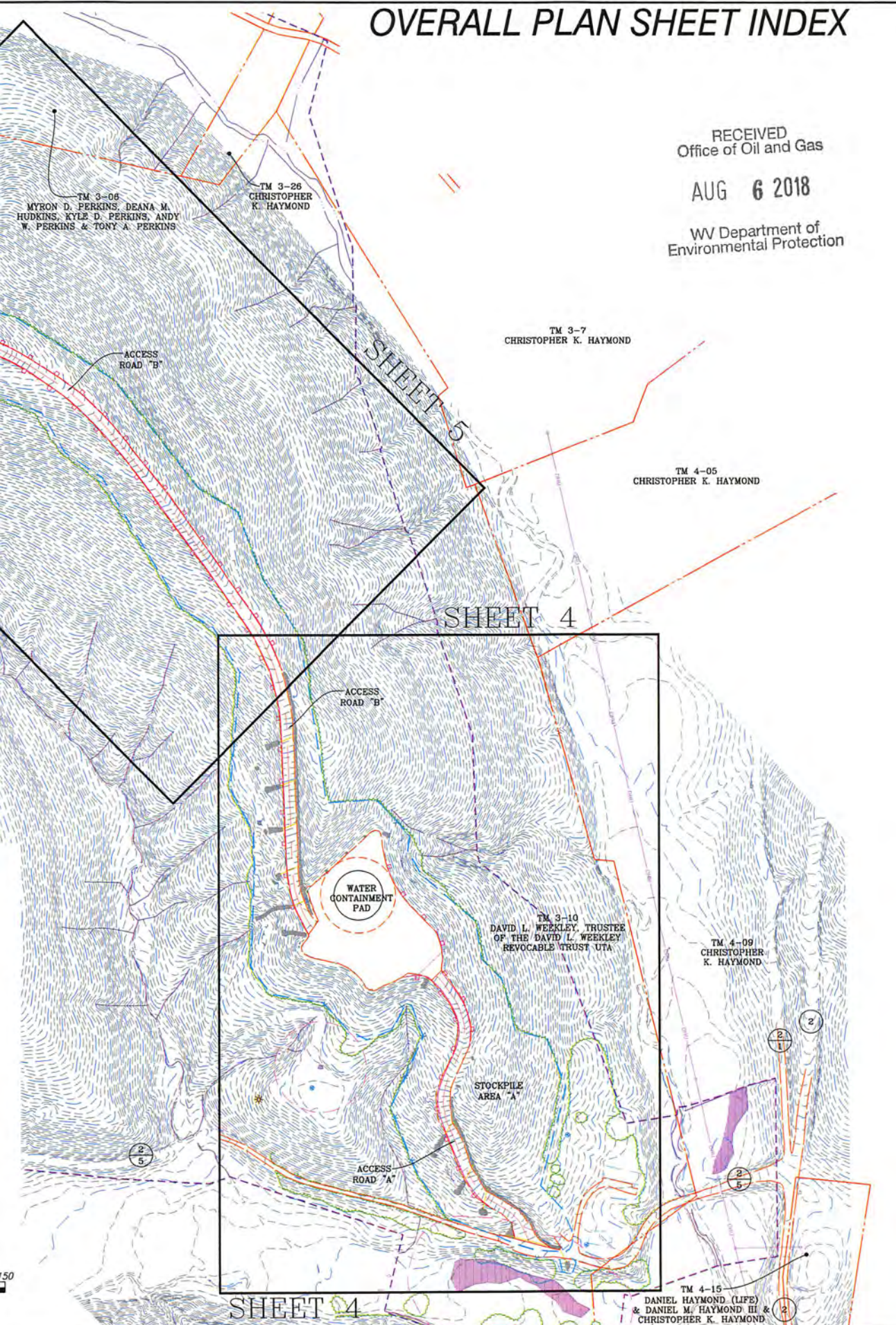


GENERAL NOTES:

1. THE TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON APRIL 6, 2014 AERIAL PHOTOGRAPHY COMPILED MAY, 2014 BY BLUE MOUNTAIN AERIAL MAPPING, BURTON, WEST VIRGINIA.
2. AS-BUILT INFORMATION SHOWN HEREON IS BASED ON FIELD SURVEY PERFORMED BY NAVITUS ENGINEERING, INC. BETWEEN OCTOBER 20, 2017 TO MARCH 5, 2018.
3. THE PROPERTY LINES SHOWN HEREON DO NOT REPRESENT A BOUNDARY SURVEY ON ANY OF THE PARCELS SHOWN. PROPERTY CORNERS AND LINES PERTINENT TO WELL LOCATION ARE BASED ON A FIELD SURVEY. THE REMAINDER OF THE PROPERTY LINES ARE BASED ON COUNTY REAL ESTATE TAX MAPS, GIS INFORMATION AND DEEDS OF RECORD.
4. UTILITIES AND THEIR LOCATIONS AS SHOWN HEREON ARE BASED ON: A) OBSERVABLE EVIDENCE OF THOSE VISIBLE, ABOVE-GROUND FACILITIES, FEATURES, AND MARKERS WHICH WERE FOUND ON THE SUBJECT PROPERTY AT THE TIME OF SURVEY PERFORMED BY NAVITUS ENGINEERING AND B) FIELD MARKINGS PLACED BY UTILITY COMPANIES IN RESPONSE TO THE WV 811 TICKET SUBMITTED BY NAVITUS ENGINEERING. NAVITUS ENGINEERING CANNOT GUARANTEE THE ACCURACY OF THE UTILITY MARKINGS PERFORMED BY OTHERS OR THAT ALL UTILITIES EXISTING WITHIN THE LIMITS OF THIS PLAN ARE SHOWN. ANY UTILITIES ENCOUNTERED SUBSEQUENT TO PLAN APPROVAL OR DURING CONSTRUCTION THAT ARE NOT SHOWN ON THE PLAN SHOULD BE REPORTED TO NAVITUS ENGINEERING AND ANTERO RESOURCES CORPORATION.



OVERALL PLAN SHEET INDEX



RECEIVED
Office of Oil and Gas

AUG 6 2018

WV Department of
Environmental Protection

TM 3-06
MYRON D. PERKINS, DEANA M.
HUDKINS, KYLE D. PERKINS, ANDY
W. PERKINS & TONY A. PERKINS

TM 3-26
CHRISTOPHER
K. HAYMOND

TM 3-7
CHRISTOPHER K. HAYMOND

TM 4-05
CHRISTOPHER K. HAYMOND

TM 3-10
DAVID L. WEEKLEY, TRUSTEE
OF THE DAVID L. WEEKLEY
REVOCABLE TRUST UTA

TM 4-09
CHRISTOPHER
K. HAYMOND

TM 4-15
DANIEL HAYMOND (LIFE)
& DANIEL M. HAYMOND III &
CHRISTOPHER K. HAYMOND



REVISION	DATE



OVERALL PLAN SHEET INDEX
WEEKLEY TRUST
 WELL PAD & WATER CONTAINMENT PAD
 CLAY DISTRICT
 RITCHIE COUNTY, WEST VIRGINIA



DATE: 03/05/2018
 SCALE: 1" = 150'
 SHEET 3 OF 9

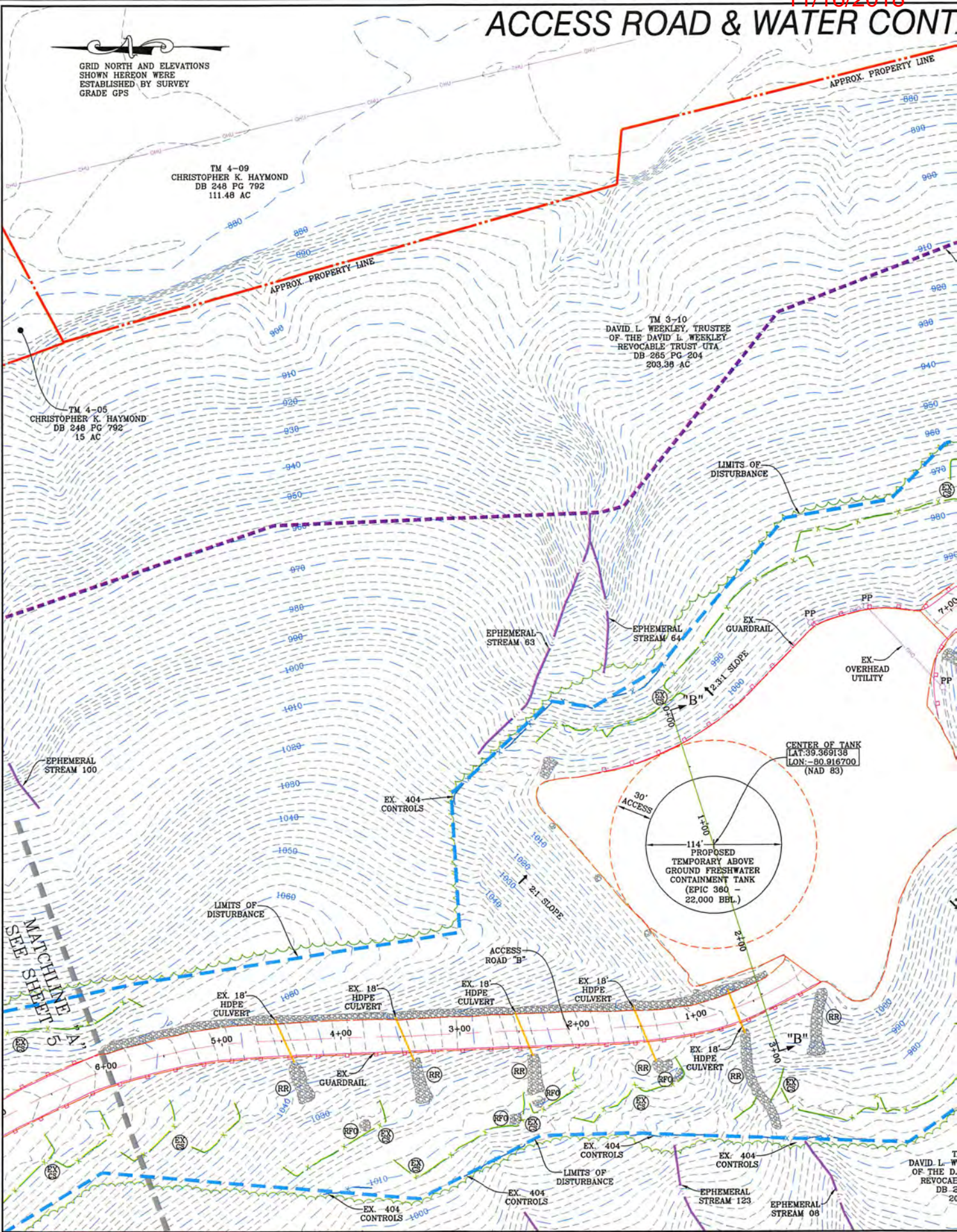
ACCESS ROAD & WATER CONT.

GRID NORTH AND ELEVATIONS SHOWN HEREON WERE ESTABLISHED BY SURVEY GRADE GPS

TM 4-09
CHRISTOPHER K. HAYMOND
DB 248 PG 792
111.48 AC

TM 4-05
CHRISTOPHER K. HAYMOND
DB 248 PG 792
15 AC

TM 3-10
DAVID L. WEEKLEY, TRUSTEE
OF THE DAVID L. WEEKLEY
REVOCABLE TRUST UTA
DB 285 PG 204
203.38 AC



DAVID L. W. OF THE D. REVOCABLE DB 2

11/16/2018

CONTAINMENT PAD AS-BUILT PLAN

TM 4-09
CHRISTOPHER K. HAYMOND
DB 248 PG 792
111.48 AC

NAVITUS

ENERGY ENGINEERING

Telephone: (888) 662-4185 | www.NavitusEng.com

ALLSTAR ECOLOGY
WETLAND-DELINEATION
STUDY AREA



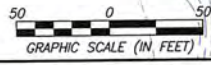
REVISION	DATE

THIS DOCUMENT
WAS PREPARED FOR:
ANTERO RESOURCES
CORPORATION

ACCESS ROAD & WATER CONTAINMENT PAD
AS-BUILT PLAN
WEEKLEY TRUST
WELL PAD & WATER CONTAINMENT PAD
CLAY DISTRICT
RITCHIE COUNTY, WEST VIRGINIA

TM 3-10
DAVID L. WEEKLEY, TRUSTEE
OF THE DAVID L. WEEKLEY
REVOCABLE TRUST UTA
DB 285 PG. 204
203.38 AC

DATE: 03/05/2018
SCALE: 1" = 50'
SHEET 4 OF 9



3-10
WEEKLEY, TRUSTEE
OF THE DAVID L. WEEKLEY
TRUST UTA
PG 204
38 AC

EX. GAS WELL
API #47-085-03236
(UNKNOWN OPERATOR)
PLUGGED

11/16/2018

RECEIVED
Office of Oil and Gas

AUG 6 2018

WV Department of
Environmental Protection

11/16/2018

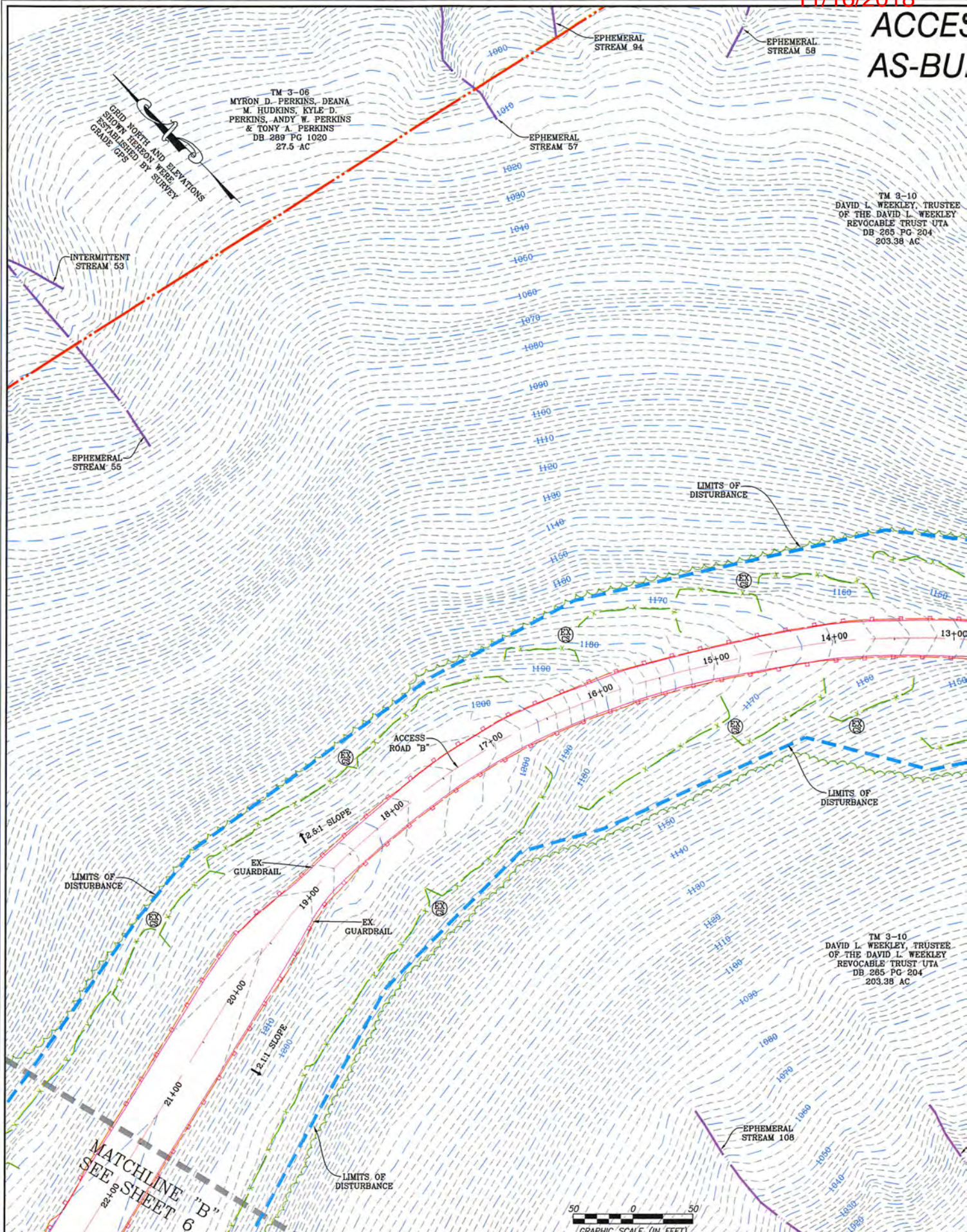
ACCESS AS-BUILT

GRID NORTH AND ELEVATIONS
SHOWN HEREON WERE
ESTABLISHED BY SURVEY

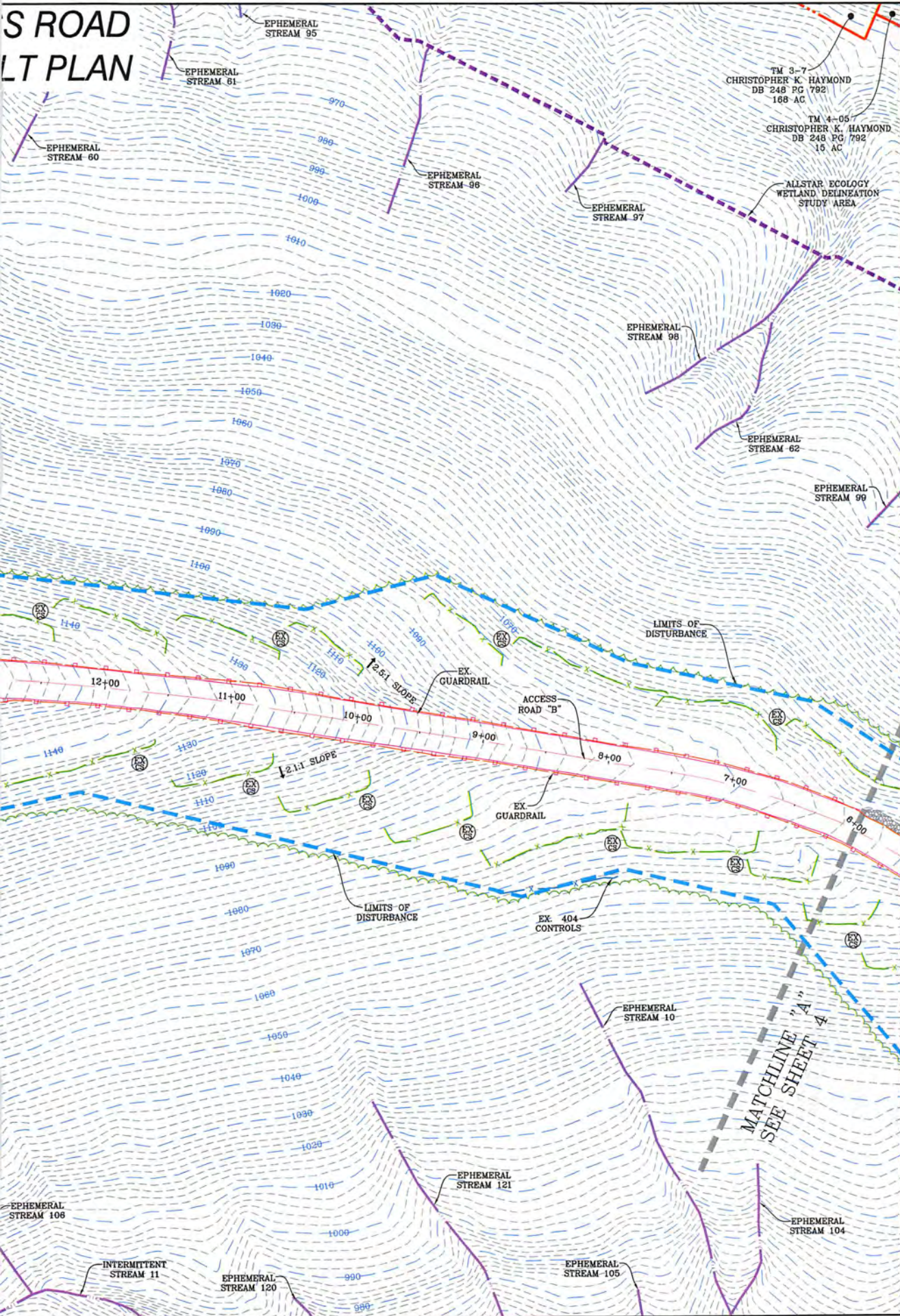
TM 3-06
MYRON D. PERKINS, DEANA
M. HUDKINS, KYLE D.
PERKINS, ANDY W. PERKINS
& TONY A. PERKINS
DB 289 PG 1020
27.5 AC

TM 3-10
DAVID L. WEEKLEY, TRUSTEE
OF THE DAVID L. WEEKLEY
REVOCABLE TRUST UTA
DB 265 PG 204
203.38 AC

TM 3-10
DAVID L. WEEKLEY, TRUSTEE
OF THE DAVID L. WEEKLEY
REVOCABLE TRUST UTA
DB 265 PG 204
203.38 AC



S ROAD ALT PLAN



NAVITUS
ENERGY ENGINEERING

Telephone: (888) 662-4185 | www.NavitusEng.com

DATE	REVISION

Antero
Resources

THIS DOCUMENT
WAS PREPARED FOR:
ANTERO RESOURCES
CORPORATION

ACCESS ROAD AS-BUILT PLAN
WEEKLEY TRUST
WELL PAD & WATER CONTAINMENT PAD
CLAY DISTRICT
RITCHIE COUNTY, WEST VIRGINIA

CHRIS A. KING
REGISTERED
0578
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER

03/05/2018

DATE: 03/05/2018
SCALE: 1" = 50'
SHEET 5 OF 9

11/16/2018

RECEIVED
Office of Oil and Gas

AUG 6 2018

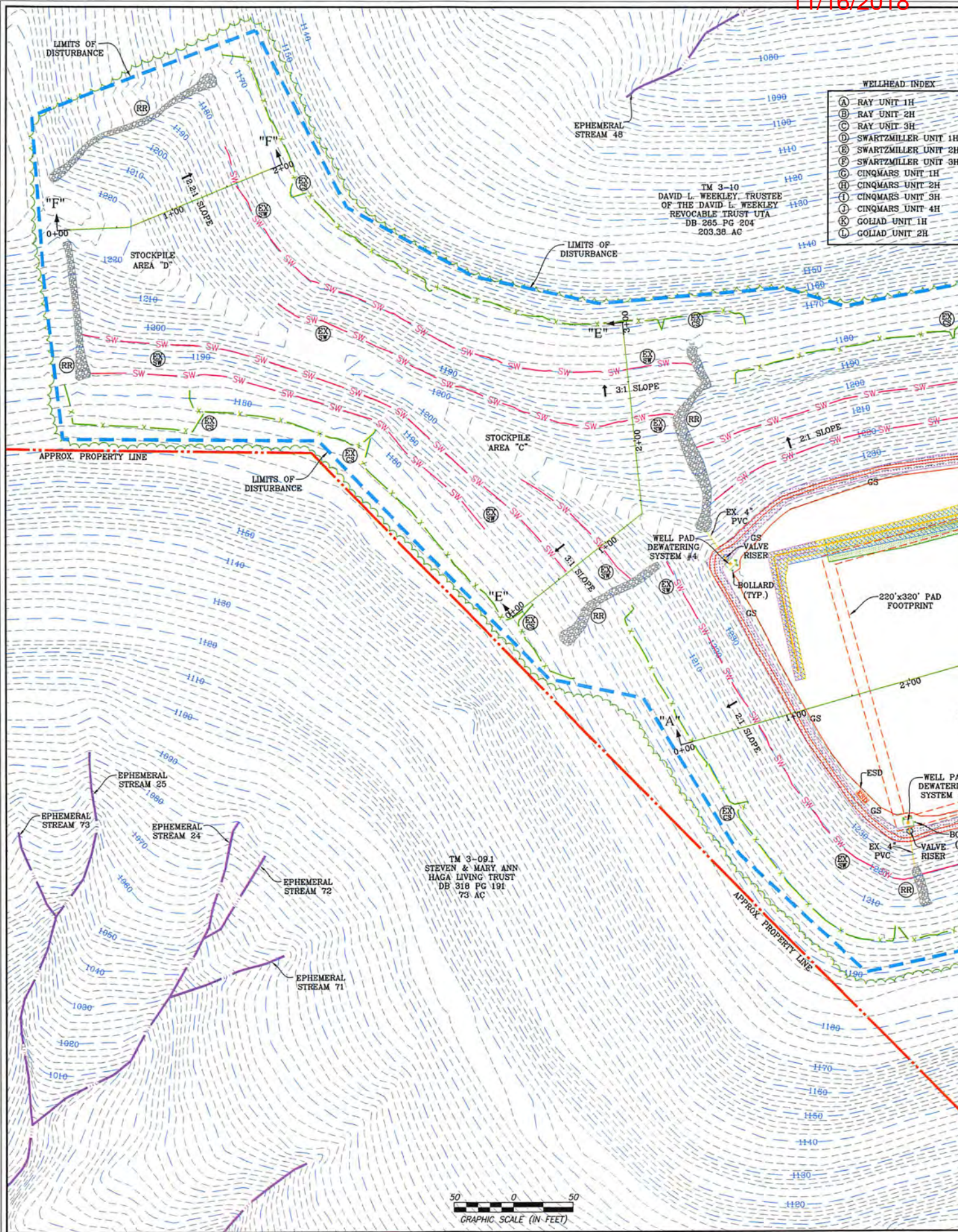
WV Department of
Environmental Protection

WELLHEAD INDEX

(A)	RAY UNIT 1H
(B)	RAY UNIT 2H
(C)	RAY UNIT 3H
(D)	SWARTZMILLER UNIT 1H
(E)	SWARTZMILLER UNIT 2H
(F)	SWARTZMILLER UNIT 3H
(G)	CINQMARS UNIT 1H
(H)	CINQMARS UNIT 2H
(I)	CINQMARS UNIT 3H
(J)	CINQMARS UNIT 4H
(K)	GOLIAD UNIT 1H
(L)	GOLIAD UNIT 2H

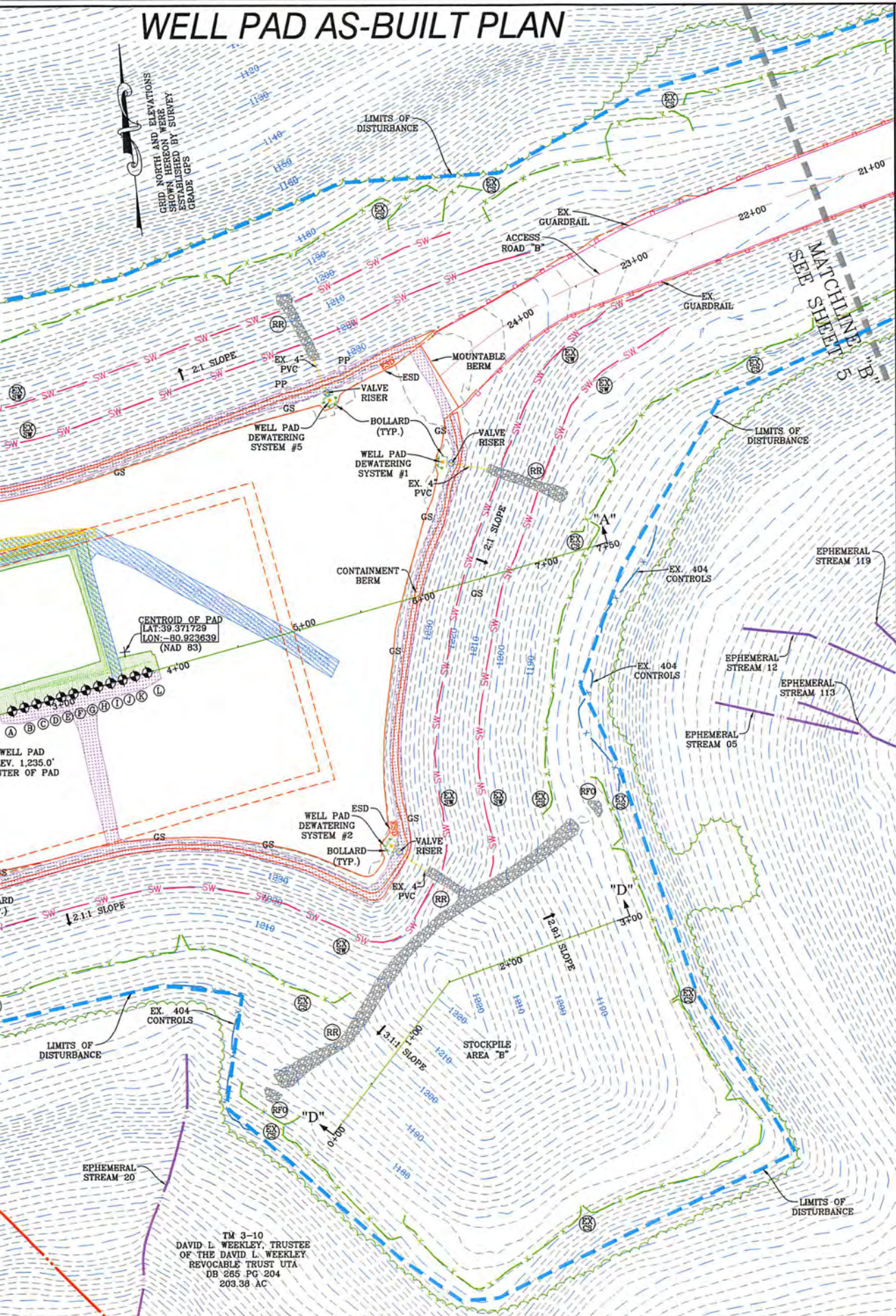
TM 3-10
 DAVID L. WEEKLEY, TRUSTEE
 OF THE DAVID L. WEEKLEY
 REVOCABLE TRUST UTA
 DB 265 PG 204
 203.38 AC

TM 3-091
 STEVEN & MARY ANN
 HAGA LIVING TRUST
 DB 318 PG 191
 73 AC



WELL PAD AS-BUILT PLAN

GRID NORTH AND ELEVATIONS SHOWN HEREON WERE ESTABLISHED BY SURVEY GRADE GFS



NAVITUS
ENERGY ENGINEERING
Telephone: (888) 662-4185 | www.NavitusEng.com

REVISION	DATE

Antero
RESOURCES

THIS DOCUMENT WAS PREPARED FOR: ANTERO RESOURCES CORPORATION

WELL PAD AS-BUILT PLAN

WEEKLEY TRUST
WELL PAD & WATER CONTAINMENT PAD
CLAY DISTRICT
RITCHIE COUNTY, WEST VIRGINIA

Professional Engineer Seal: **CHRIS A. KING**, REGISTERED PROFESSIONAL ENGINEER, STATE OF WEST VIRGINIA, No. 9578. Date: 03/05/2018.

DATE: 03/05/2018
SCALE: 1" = 50'
SHEET 6 OF 9

TM 3-10
DAVID L. WEEKLEY, TRUSTEE
OF THE DAVID L. WEEKLEY
REVOCABLE TRUST UTA
DB 285 PG 204
203.38 AC

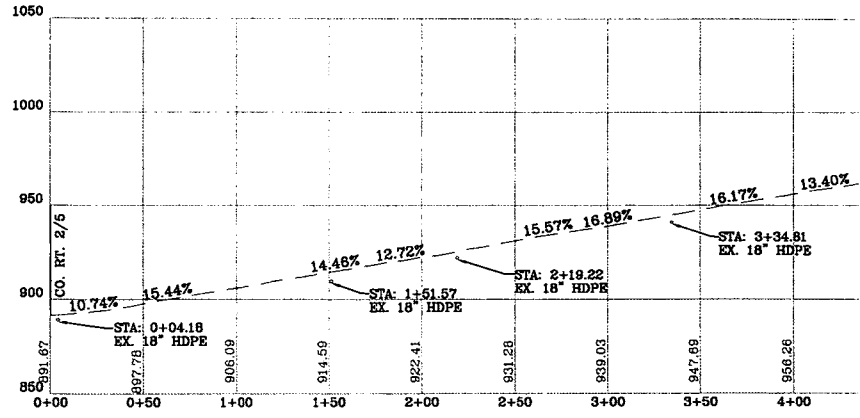
11/16/2018

RECEIVED
Office of Oil and Gas

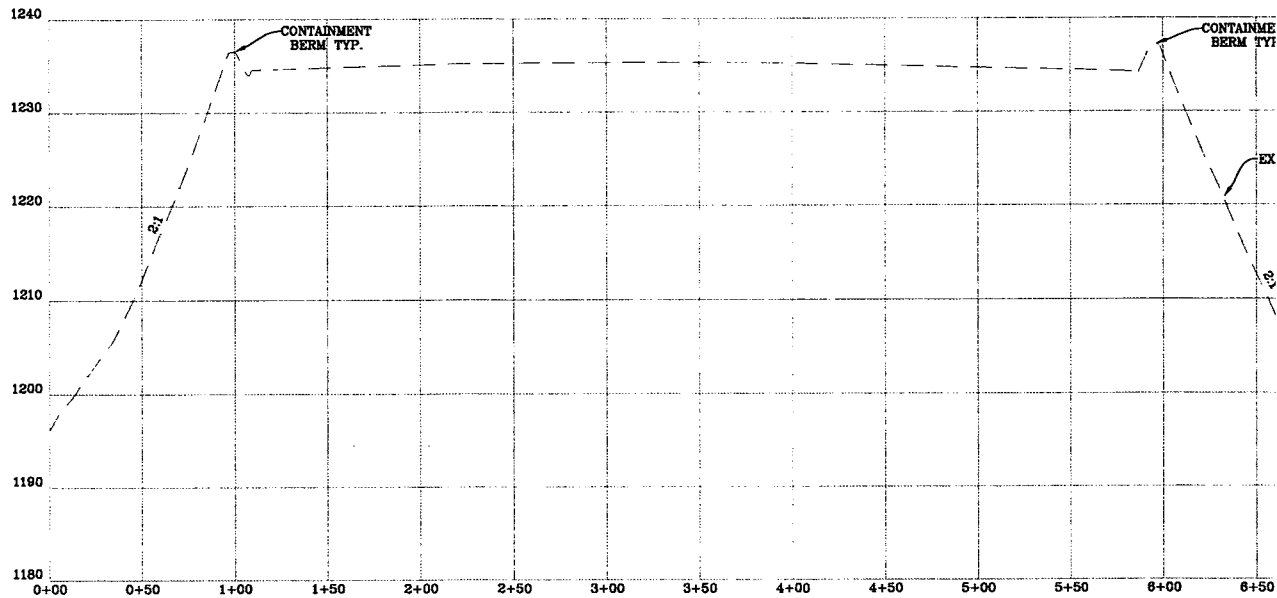
AUG 6 2018

WV Department of
Environmental Protection

ACCESS ROAD AS-BUILT CONTAINMENT PAD

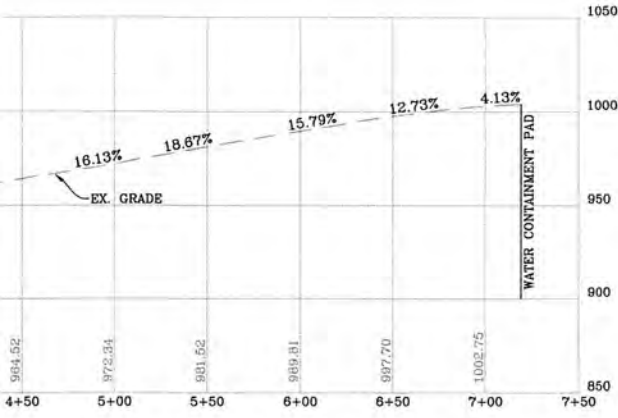


ACCESS ROAD "A" AS-BUILT
SCALE: HORIZ. 1" = 50' VERT. 1" = 10'



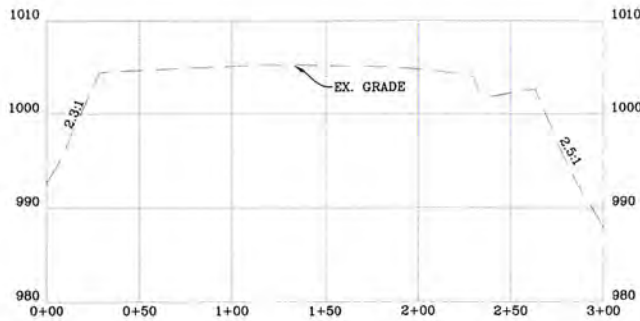
WELL PAD AS-BUILT CROSS-SECTION "A-A"
SCALE: HORIZ. 1" = 50' VERT. 1" = 10'

PROFILE, WELL PAD & WATER CONTAINMENT PAD AS-BUILT SECTIONS



T PROFILE
50'

RECEIVED
Office of Oil and Gas
AUG 6 2018
WV Department of
Environmental Protection



WATER CONTAINMENT PAD AS-BUILT CROSS-SECTION "B-B"
SCALE: HORIZ. 1" = 50' VERT. 1" = 10'



REVISION	DATE

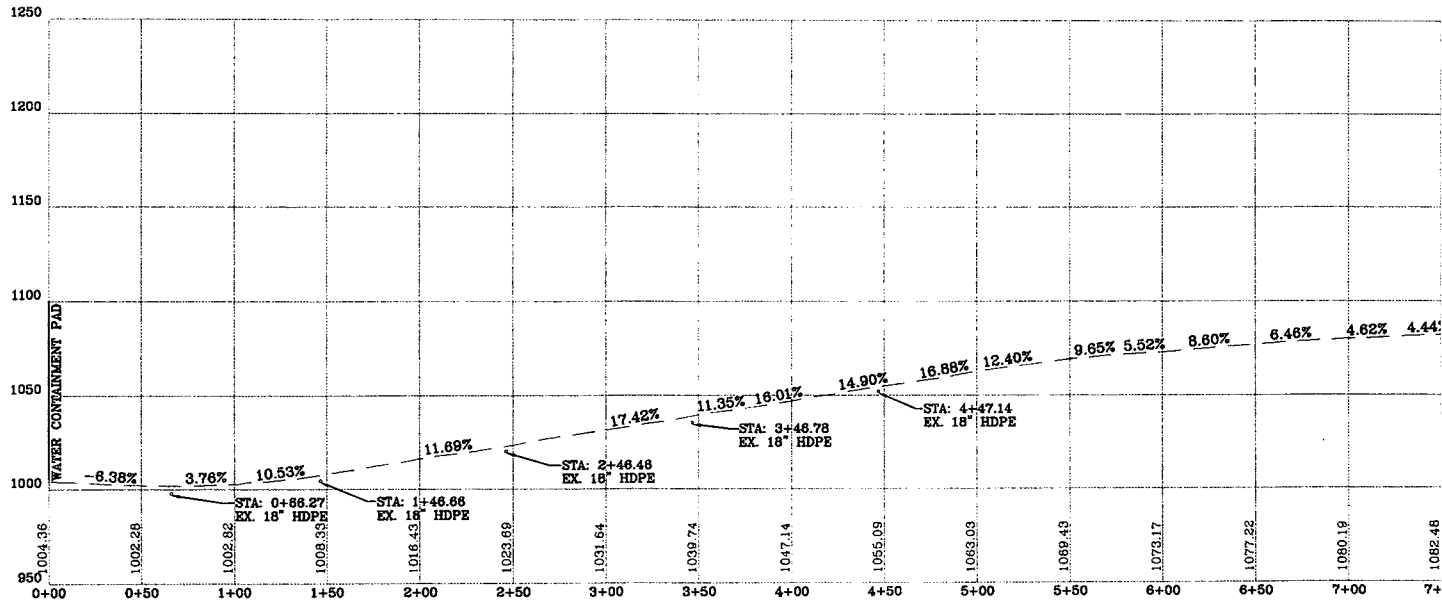
THIS DOCUMENT
WAS PREPARED FOR:
ANTERO RESOURCES
CORPORATION

ACCESS ROAD AS-BUILT PROFILE, WELL PAD &
WATER CONTAINMENT PAD AS-BUILT SECTIONS
WEEKLEY TRUST
WELL PAD & WATER CONTAINMENT PAD
CLAY DISTRICT
RITCHIE COUNTY, WEST VIRGINIA



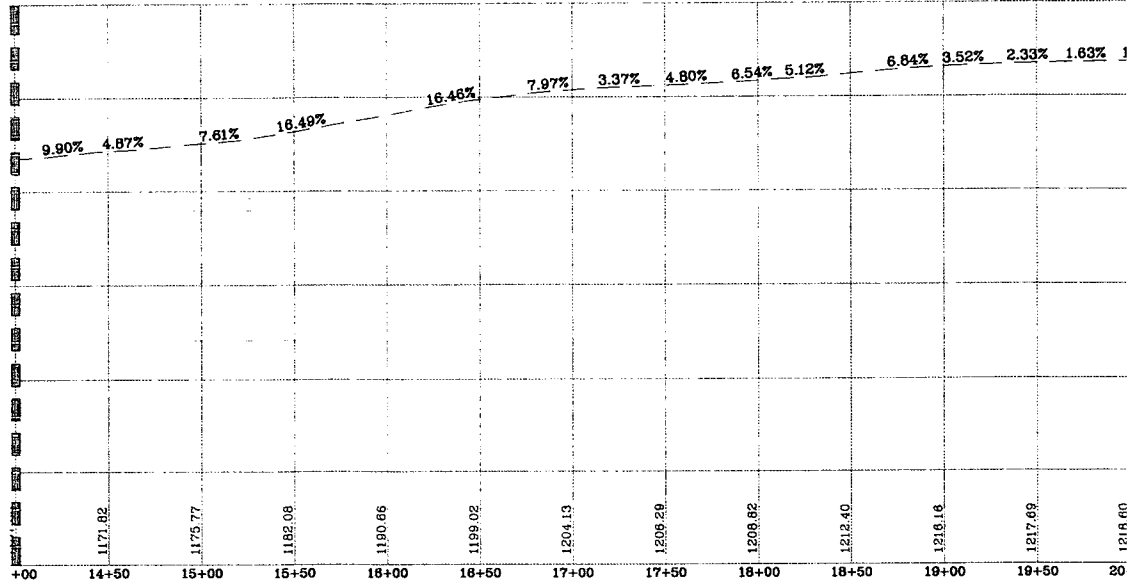
DATE: 03/05/2018
SCALE: AS SHOWN
SHEET 7 OF 9

ACCESS ROAD AS-BU



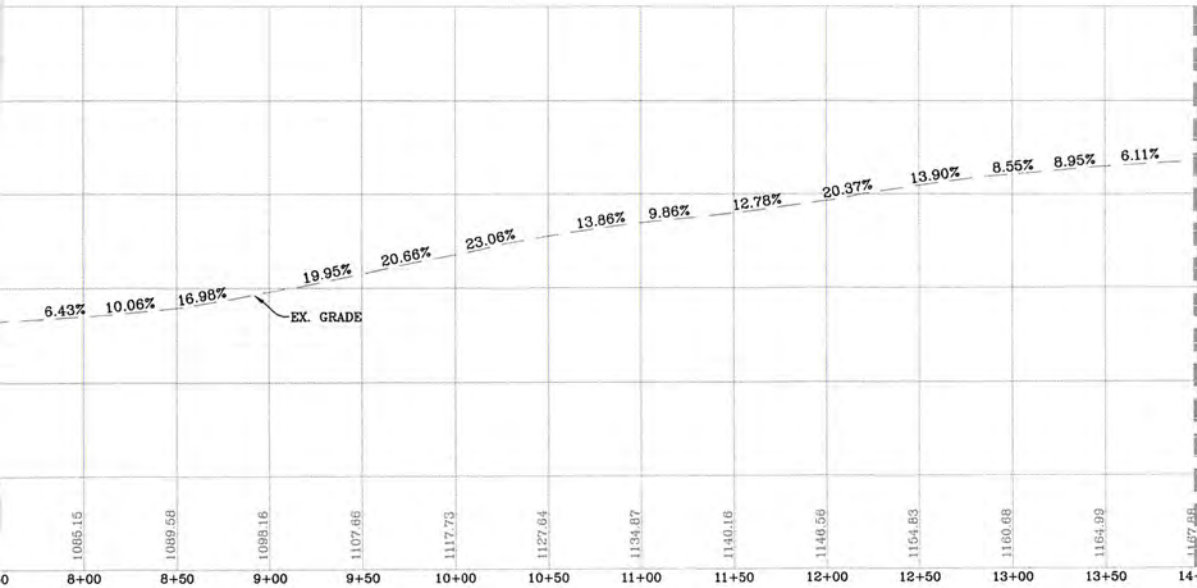
ACCESS ROAD "B" AS-BU
SCALE: HORIZ. 1" = 50' VERT. 1" = 10'

MATCHLINE
SEE ABOVE



ACCESS ROAD "B" AS-BU
SCALE: HORIZ. 1" = 50' VERT. 1" = 10'

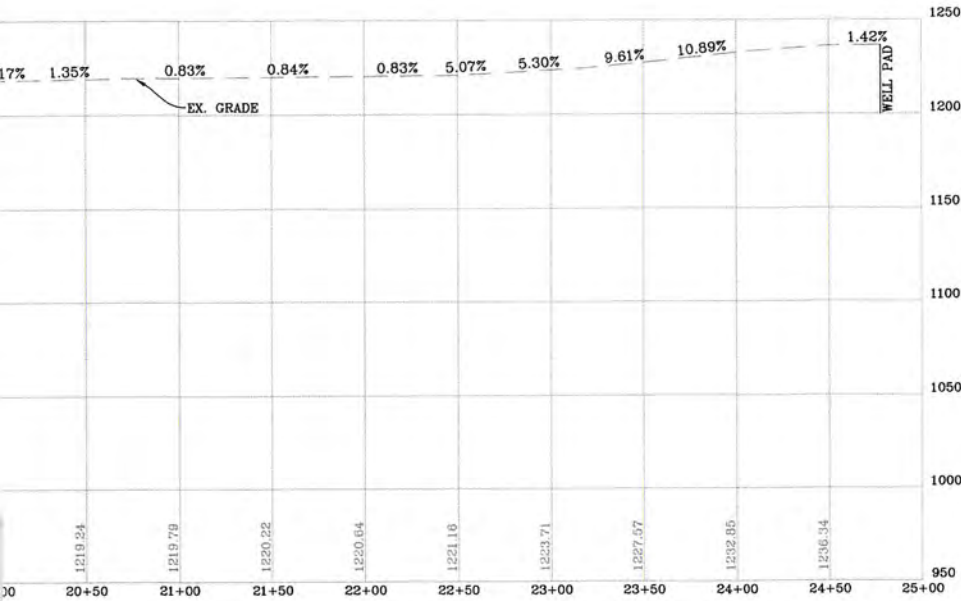
BUILT PROFILE



MATCHLINE
SEE BELOW

LT PROFILE

= 50'



LT PROFILE

= 50'



REVISION	DATE



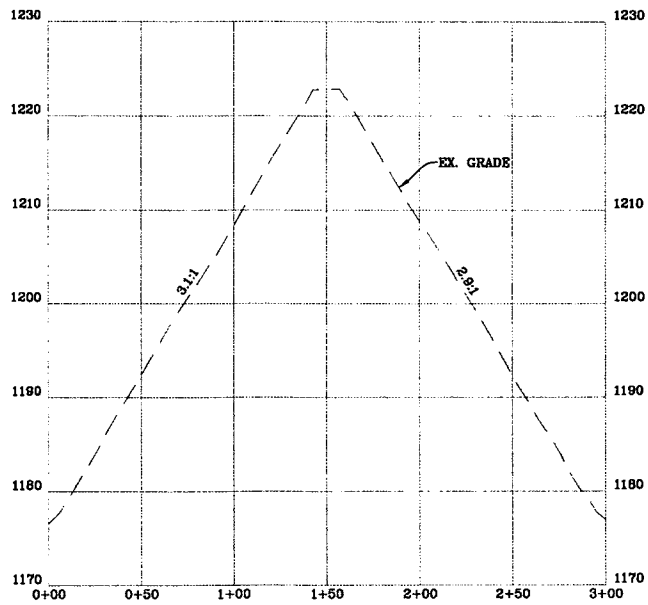
ACCESS ROAD AS-BUILT PROFILE
WEEKLEY TRUST
 WELL PAD & WATER CONTAINMENT PAD
 CLAY DISTRICT
 RITCHIE COUNTY, WEST VIRGINIA



DATE: 03/05/2018
 SCALE: AS SHOWN
 SHEET 8 OF 9

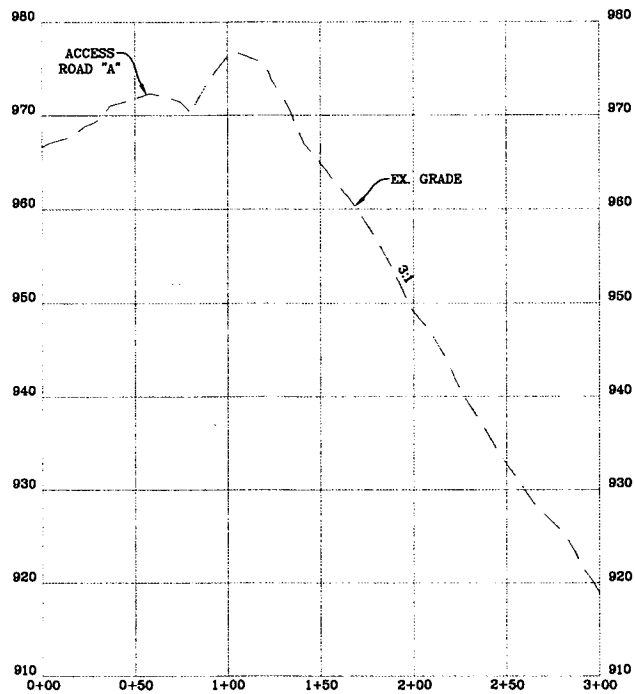
RECEIVED
 Office of Oil and Gas
AUG 6 2018
 WV Department of
 Environmental Protection

STOCKPILE AS-BUILT



STOCKPILE AREA "B" AS-BUILT CROSS-SECTION "D-D"

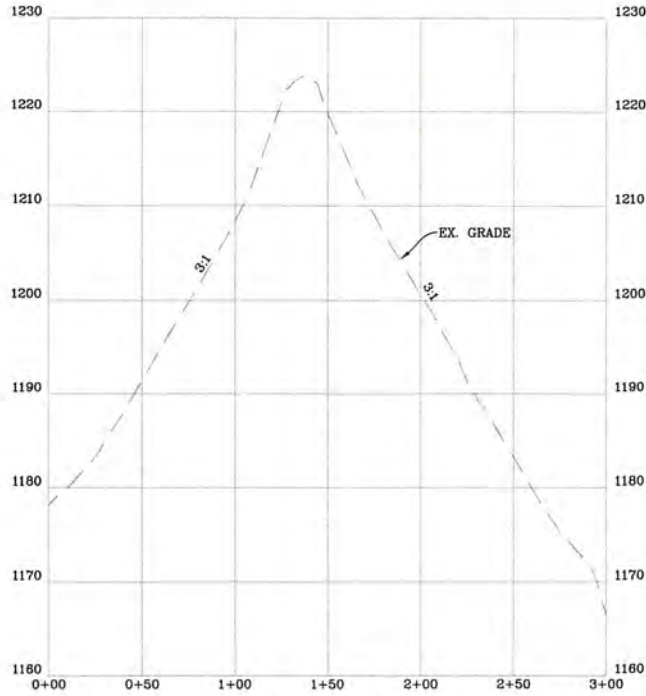
SCALE: HORIZ. 1" = 50' VERT. 1" = 10'



STOCKPILE AREA "A" AS-BUILT CROSS-SECTION "C-C"

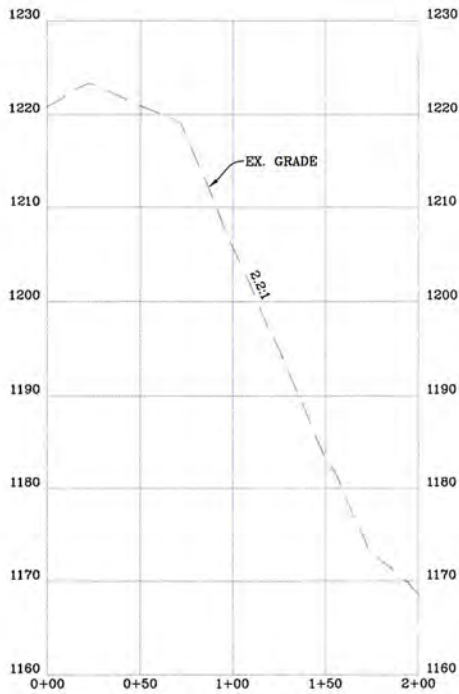
SCALE: HORIZ. 1" = 50' VERT. 1" = 10'

T SECTIONS



STOCKPILE AREA "C" AS-BUILT CROSS-SECTION "E-E"

SCALE: HORIZ. 1" = 50' VERT. 1" = 10'



STOCKPILE AREA "D" AS-BUILT CROSS-SECTION "F-F"

SCALE: HORIZ. 1" = 50' VERT. 1" = 10'

RECEIVED
Office of Oil and Gas
AUG 6 2018
WV Department of
Environmental Protection



REVISION

DATE



THIS DOCUMENT
WAS PREPARED FOR:
ANTERO RESOURCES
CORPORATION

STOCKPILE AS-BUILT SECTIONS

WEEKLEY TRUST
WELL PAD & WATER CONTAINMENT PAD
CLAY DISTRICT
RITCHIE COUNTY, WEST VIRGINIA



DATE: 03/05/2018

SCALE: AS SHOWN

SHEET 9 OF 9