



west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Friday, September 14, 2018
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for CROWN UNIT 3H
47-095-02455-00-00

Lateral Shift

ANTERO RESOURCES CORPORATION

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin
Chief

A blue ink signature of James A. Martin, written in a cursive style. The signature is positioned to the right of the name and title.

Operator's Well Number: CROWN UNIT 3H
Farm Name: WEESE, ROGER R.
U.S. WELL NUMBER: 47-095-02455-00-00
Horizontal 6A New Drill
Date Modification Issued:

Promoting a healthy environment.

WW-6B
(04/15)

Permit Modification API# 47-095-02455 **7146**
API NO. 47-095 - 02455
OPERATOR WELL NO. Crown Unit 3H
Well Pad Name: Neat Pad

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

1) Well Operator: Antero Resources Corporation 494507062 095 - Tyler Meade Middlebourne 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Crown Unit 3H Well Pad Name: Neat Pad

3) Farm Name/Surface Owner: Roger R. Weese Public Road Access: CR 7

4) Elevation, current ground: 1005' 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: 6600' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2800#

Received

DH4
7-25-18
JEB
7/25/2018

8) Proposed Total Vertical Depth: 6600' TVD

9) Formation at Total Vertical Depth: Marcellus

JUL 26 2018

10) Proposed Total Measured Depth: 17800' MD

Office of Oil and Gas
WV Dept. of Environmental Protection

11) Proposed Horizontal Leg Length: 9900'

12) Approximate Fresh Water Strata Depths: 100', 121', 166'

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: 1441'

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: _____

WW-6B
(04/15)

Permit Modification API# 47-095-02455

API NO. 47-095-02455
 OPERATOR WELL NO. Crown Unit 3H
 Well Pad Name: Neat Pad

18) CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20"	New	H-40	94#	80	80	CTS, 77 Cu. Ft.
Fresh Water	13-3/8"	New	J-55	54.5#	300	300	CTS, 417 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#	17800	17800	4487 Cu. Ft
Tubing	2-3/8"	New	N-80	4.7#			
Liners							

Drill 7-25-18 GEB 7/25/2018

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
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 NPOZ & TRIL-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			

WV Dept. of Environmental Protection
Received
 JUL 26 2018
 Office of Oil and Gas
 WV Dept. of Environmental Protection

WW-6B
(10/14)

API NO. 47-095 - 02455
OPERATOR WELL NO. Crown Unit 3H
Well Pad Name: Neal Pad

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

DMH
7-25-18
JCB
7/25/2018

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 30.47 acres

22) Area to be disturbed for well pad only, less access road (acres): 8.95 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

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.

Received

*Note: Attach additional sheets as needed.

JUL 25 2018 Page 3 of 3

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
<u>Roger R. Weese Lease</u>			
Roger R. Weese	Antero Resources Appalachian Corporation	1/8+	0435/0766
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<u>Virginia Riggs Lease</u>			
Virginia Riggs	Antero Resources Corporation	1/8+	0436/0441
<u>Roy D. Hadley Lease</u>			
Roy D. Hadley	Chesapeake Appalachia LLC	1/8	0370/0187
Chesapeake Appalachia, LLC	Statoil USA Onshore Properties, Inc.	Assignment	0378/0735
Statoil USA Onshore Properties, Inc.	Antero Resources Corporation	Assignment	0544/0291
<u>The Joelynn Family Preservation Trust Lease</u>			
The Joelynn Family Preservation Trust	Antero Resources Corporation	1/8+	0466/0108
<u>Densel Ferrel, et ux Lease</u>			
Densel Ferrel, et ux	Warren R. Haught	1/8	0213/0358
Warren R. Haught	Warren Associates, Inc.	Assignment	0236/0642
Warren Associates, Inc.	Sancho Oil & Gas Corporation	Assignment	0369/0502
Sancho Oil & Gas Corporation	Republic Energy Ventures, LLC	Assignment	0375/0811
Republic Energy Ventures, LLC	Antero Resources Corporation	Assignment	0436/0216
<u>Frank Grass, et al Lease</u>			
Frank Grass, et al	Sancho Oil & Gas Corporation	1/8	0335/0601
Sancho Oil & Gas Corporation	Antero Resources Corporation	Assignment	0436/0177

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

****CONTINUED ON NEXT PAGE****

RECEIVED
 Office of Oil and Gas
 JUL 16 2018
 WV Department of
 Environmental Protection

WW-6A1
(5/13)

Operator's Well No. Crown Unit 3H

**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:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<u>Frank Grass, et al Lease</u>	Frank Grass, et al Sancho Oil & Gas Corporation	Sancho Oil & Gas Corporation Antero Resources Corporation	1/8 Assignment	0335/0601 0436/0177

*Partial Assignments to Antero Resources 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 Corporation
 By: Kevin Kilstrom
 Its: Senior VP - Production

RECEIVED
Office of Oil and Gas

JUL 16 2018

WV Department of
Environmental Protection

FORM WW-6A1
EXHIBIT 1

FILED

JUN 10 2013

Natalie E. Tomant,
Secretary of State
1900 Kanawha Blvd E
Bldg 1, Suite 157-E
Charleston, WV 25305



Fenny Baker, Manager
Corporations Division
Tel: (304)558-8000
Fax: (304)558-4381
Website: www.wvsof.com
E-mail: business@wvsof.com

APPLICATION FOR
AMENDED CERTIFICATE
OF AUTHORITY

Office Hours: Monday - Friday
8:30 a.m. - 5:00 p.m. ET

FILE ONE ORIGINAL
(Two if you want a filed
stamped copy returned to you)
FEE: \$35.00

**** In accordance with the provisions of the West Virginia Code, the undersigned corporation hereby ****
applies for an Amended Certificate of Authority and submits the following statement:

1. Name under which the corporation was authorized to transact business in WV: Antero Resources Appalachia Corporation
2. Date Certificate of Authority was issued in West Virginia: 6/25/2009
3. Corporate name has been changed to: Antero Resources Corporation
(Attach one Certified Copy of Name Change as filed in home State of incorporation.)
4. Name the corporation elects to use in WV: Antero Resources Corporation
(due to home state name not being available)
5. Other amendments: _____
(attach additional pages if necessary)

6. Name and phone number of contact person. (This is optional, however, if there is a problem with the filing, listing a contact person and phone number may avoid having to return or reject the document.)

Alwyn A. Schopp (303) 357-7310
Contact Name Phone Number

7. Signature information (See below **Important Local Notice Regarding Signatures**):

Print Name of Signer: Alwyn A. Schopp Title/Capacity: Authorized Person
Signature: [Handwritten Signature] Date: June 10, 2013

Important Local Notice Regarding Signatures For West Virginia Code §11D-1-12b. Penalty for signing false document. Any person who signs a document he or she knows is false in any material respect and knows that the document is to be delivered to the secretary of state for filing is guilty of a misdemeanor and, upon conviction thereof, shall be fined not more than one thousand dollars or confined in the county or regional jail not more than one year, or both.

RECEIVED
Office of Oil and Gas

JUL 16 2018

WV Department of
Environmental Protection



Crown Unit 3H



Antero Resources Corporation

Crown Unit 3H - AOR



WELL SYMBOLS

REMARKS
No wells of interest within area of review.

July 6, 2018

RECEIVED
Office of Oil and Gas
JUL 16 2018
WV Department of
Environmental Protection

LATITUDE 39°27'30"

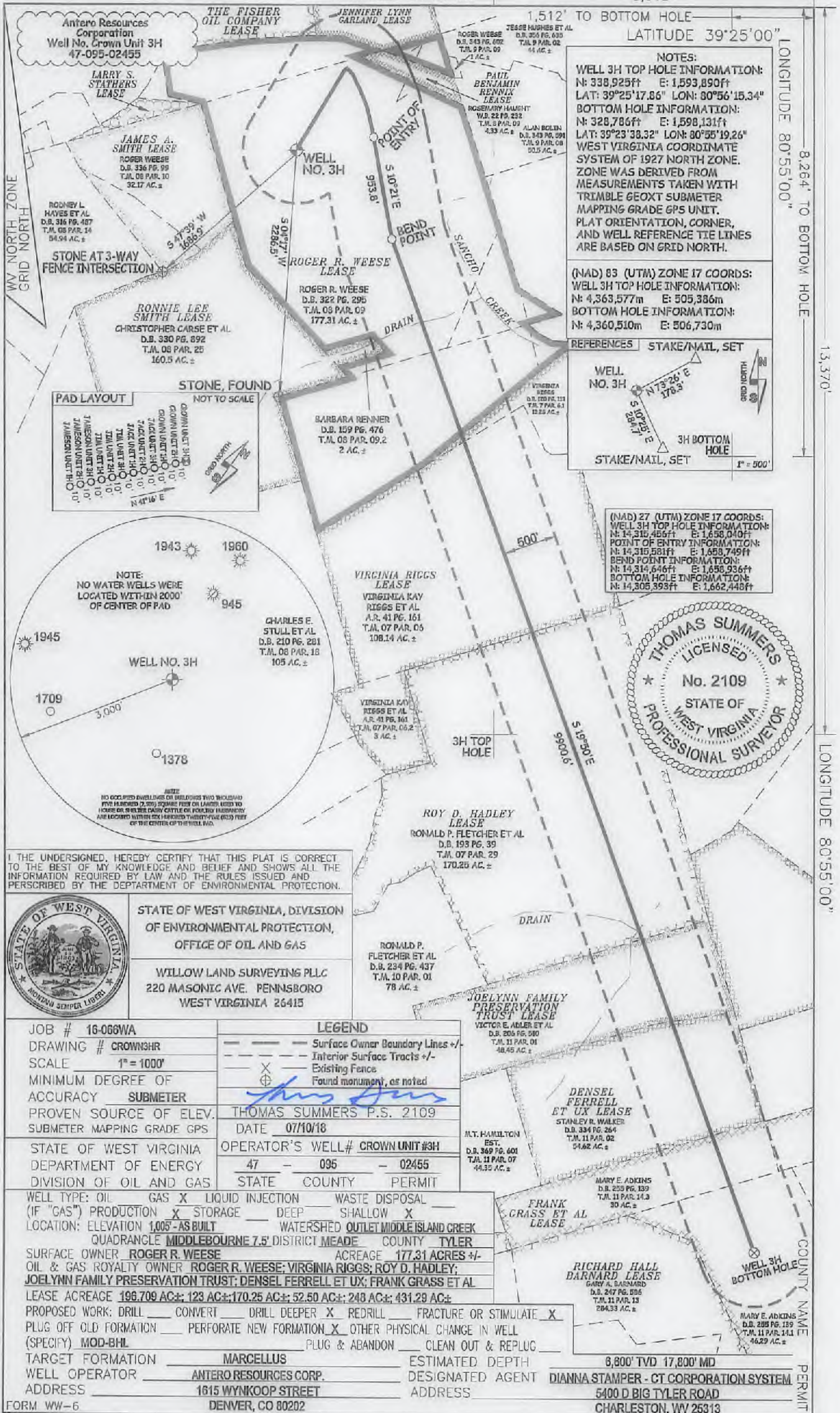
5,913'

LATITUDE 39°25'00"

LONGITUDE 80°55'00"

13,370'

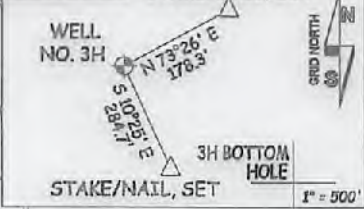
LONGITUDE 80°55'00"



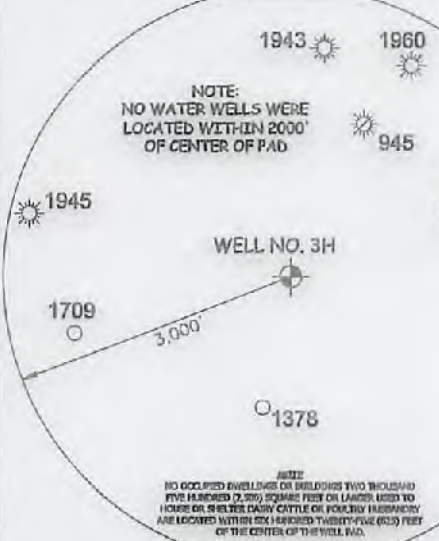
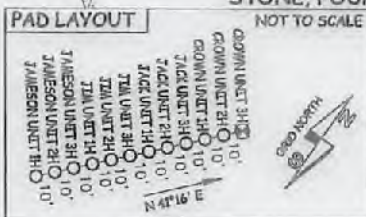
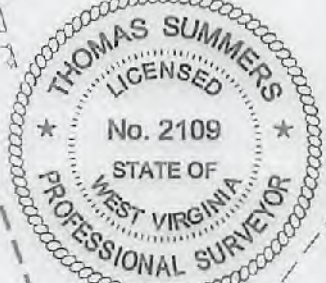
NOTES:
 WELL 3H TOP HOLE INFORMATION:
 N: 338,925ft E: 1,593,850ft
 LAT: 39°25'17.85" LON: 80°56'15.34"
 BOTTOM HOLE INFORMATION:
 N: 328,786ft E: 1,598,131ft
 LAT: 39°23'38.32" LON: 80°55'19.26"
 WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE 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: 4,363,577m E: 505,386m
 BOTTOM HOLE INFORMATION:
 N: 4,360,510m E: 506,730m

REFERENCES STAKE/NAIL, SET



(NAD) 27 (UTM) ZONE 17 COORDS:
 WELL 3H TOP HOLE INFORMATION:
 N: 14,315,456ft E: 1,658,040ft
 POINT OF ENTRY INFORMATION:
 N: 14,315,581ft E: 1,658,749ft
 BEND POINT INFORMATION:
 N: 14,314,646ft E: 1,658,936ft
 BOTTOM HOLE INFORMATION:
 N: 14,305,393ft E: 1,662,448ft



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

JOB # 16-066WA
 DRAWING # CROWN3HR
 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 Existing Fence
 ⊕ Found monument, as noted

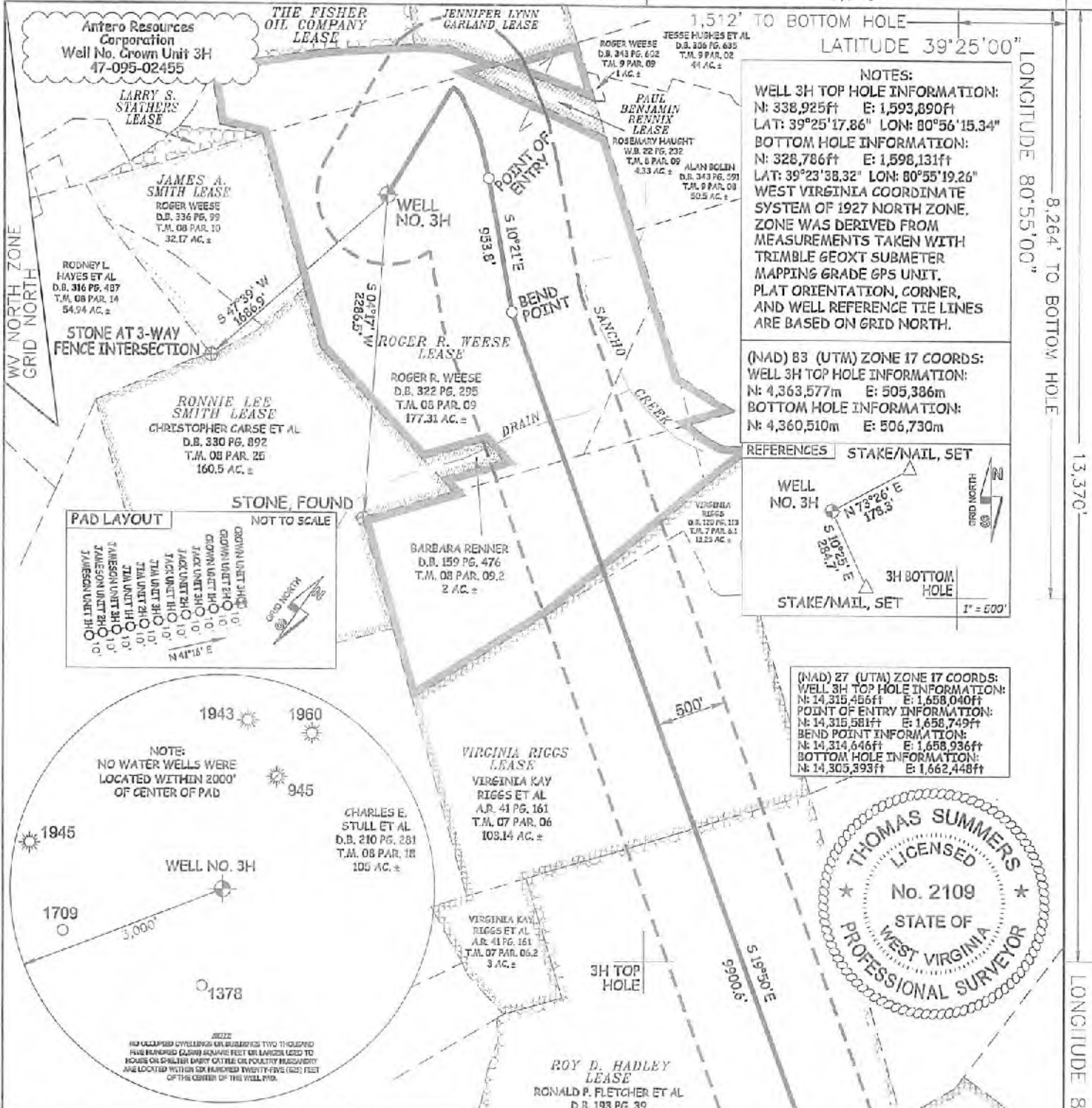
THOMAS SUMMERS P.S. 2109
 DATE 07/10/18

OPERATOR'S WELL# CROWN UNIT #3H
 47 - 095 - 02455
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X
 LOCATION: ELEVATION 1,005' - AS BUILT WATERSHED OUTLET MIDDLE ISLAND CREEK
 QUADRANGLE MIDDLEBOURNE 7.5' DISTRICT MEADE COUNTY TYLER
 SURFACE OWNER ROGER R. WEESE ACREAGE 177.31 ACRES +/-
 OIL & GAS ROYALTY OWNER ROGER R. WEESE; VIRGINIA RIGGS; ROY D. HADLEY; JOELYNN FAMILY PRESERVATION TRUST; DENSEL FERRELL ET UX; FRANK GRASS ET AL
 LEASE ACREAGE 196.709 AC±; 123 AC±; 170.25 AC±; 52.50 AC±; 248 AC±; 431.29 AC±
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER X REDRILL FRACTURE OR STIMULATE X
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL
 (SPECIFY) MOD-BHL PLUG & ABANDON CLEAN OUT & REPLUG
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH 8,800' TVD 17,800' MD
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
 ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
 DENVER, CO 80202 CHARLESTON, WV 25313

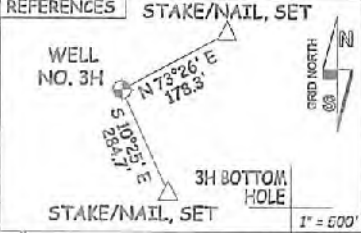
LATITUDE 39°27'30"

LATITUDE 39°25'00"



NOTES:
 WELL 3H TOP HOLE INFORMATION:
 N: 338,925ft E: 1,593,890ft
 LAT: 39°25'17.86" LON: 80°56'15.34"
 BOTTOM HOLE INFORMATION:
 N: 328,786ft E: 1,598,131ft
 LAT: 39°23'38.32" LON: 80°55'19.26"
 WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. 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 3H TOP HOLE INFORMATION:
 N: 4,363,577m E: 505,386m
 BOTTOM HOLE INFORMATION:
 N: 4,360,510m E: 506,730m



(NAD) 27 (UTM) ZONE 17 COORDS:
 WELL 3H TOP HOLE INFORMATION:
 N: 14,315,456ft E: 1,658,040ft
 POINT OF ENTRY INFORMATION:
 N: 14,315,581ft E: 1,658,749ft
 BEND POINT INFORMATION:
 N: 14,314,646ft E: 1,658,936ft
 BOTTOM HOLE INFORMATION:
 N: 14,305,393ft E: 1,662,448ft



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

JOB # 16-066WA	LEGEND
DRAWING # CROWN3HR	Surface Owner Boundary Lines +/-
SCALE 1" = 1000'	Interior Surface Tracts +/-
MINIMUM DEGREE OF ACCURACY SUBMETER	Existing Fence
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS	Found monument, as noted
STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS	THOMAS SUMMERS P.S. 2109
	DATE 07/10/18
	OPERATOR'S WELL# CROWN UNIT #3H
	47 - 095 - 02455
	STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 1,005'-AS-BUILT WATERSHED OUTLET MIDDLE ISLAND CREEK
 QUADRANGLE MIDDLEBOURNE 7.5' DISTRICT MEADE COUNTY TYLER
 SURFACE OWNER ROGER R. WEESE ACREAGE 177.31 ACRES +/-
 OIL & GAS ROYALTY OWNER ROGER R. WEESE; VIRGINIA RIGGS; ROY D. HADLEY;
 JOELYNN FAMILY PRESERVATION TRUST; DENSEL FERRELL ET UX; FRANK GRASS ET AL
 LEASE ACREAGE 196.709 AC±; 123 AC±; 170.25 AC±; 52.50 AC±; 248 AC±; 431.29 AC±
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER REBRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) MOD-BHL PLUG & ABANDON CLEAN OUT & REPLUG
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,600' TVD 17,800' MD
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
 ADDRESS 1815 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
 DENVER, CO 80202 CHARLESTON, WV 25313

LONGITUDE 80°55'00" LONGITUDE 80°55'00" LONGITUDE 80°55'00"