

LATITUDE 39°12'30"

6,908'

LATITUDE 39°10'00"

5,586' TO BOTTOM HOLE

LONGITUDE 80°52'30"

10,441' TO BOTTOM HOLE

12,963'

LONGITUDE 80°52'30"

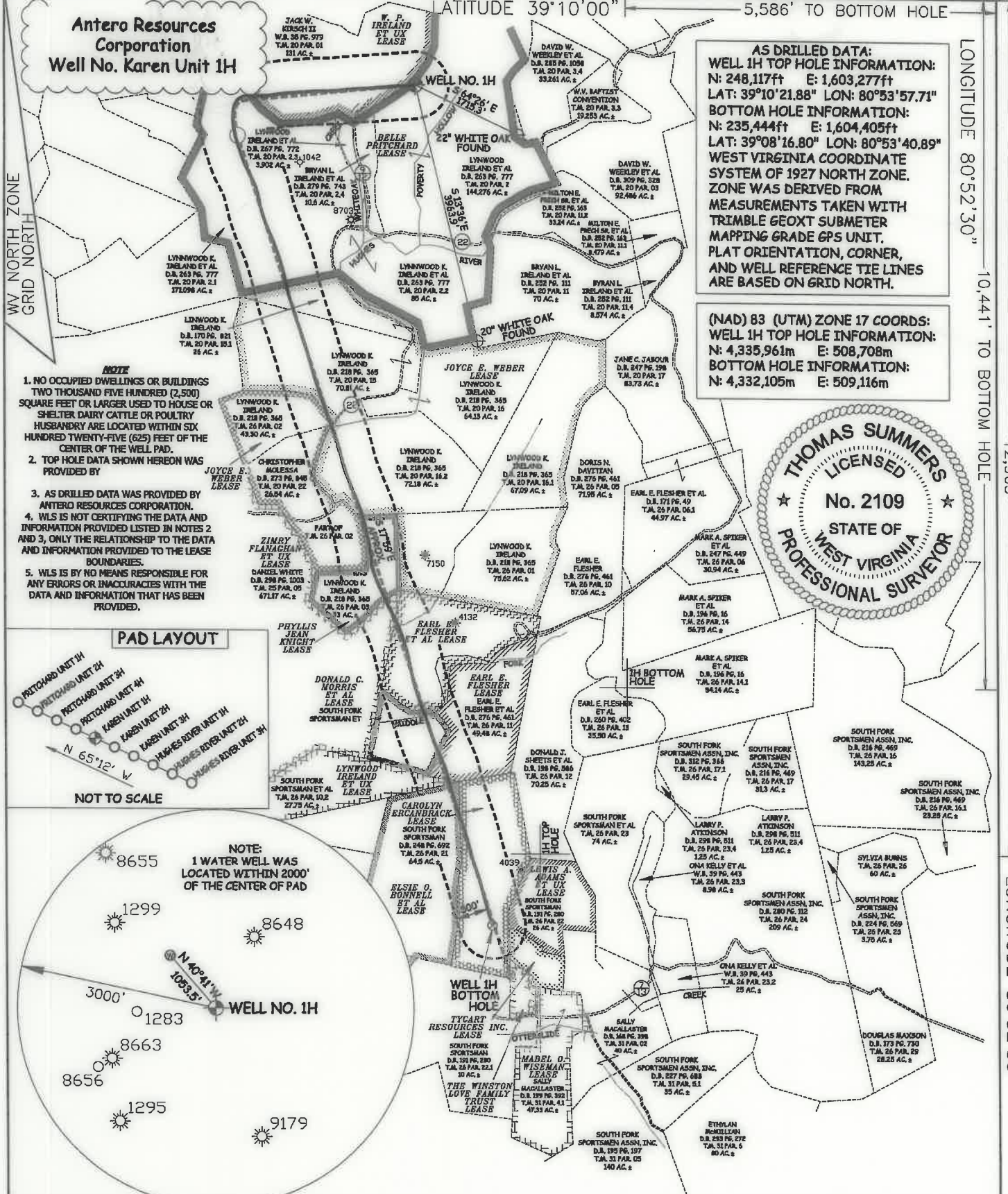
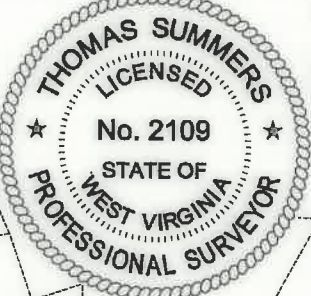
COUNTY NAME

PERMIT

# Antero Resources Corporation Well No. Karen Unit 1H

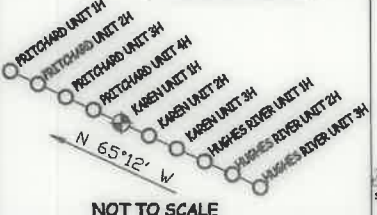
**AS DRILLED DATA:**  
**WELL 1H TOP HOLE INFORMATION:**  
 N: 248,117ft E: 1,603,277ft  
**BOTTOM HOLE INFORMATION:**  
 N: 235,444ft E: 1,604,405ft  
**LAT: 39°10'21.88" LON: 80°53'57.71"**  
**WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE.**  
 ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE 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 1H TOP HOLE INFORMATION:**  
 N: 4,335,961m E: 508,708m  
**BOTTOM HOLE INFORMATION:**  
 N: 4,332,105m E: 509,116m



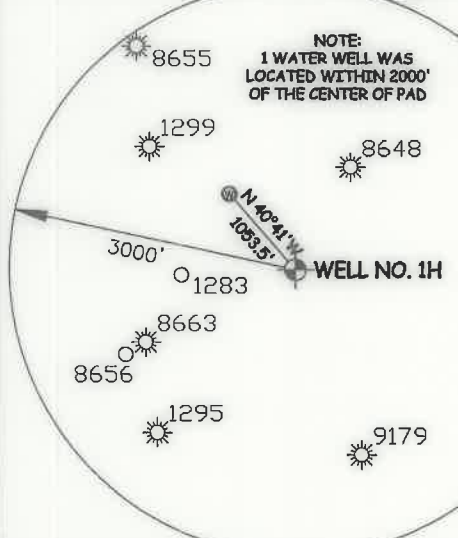
- NOTE**
1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.
  2. TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY
  3. AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
  4. WLS IS NOT CERTIFYING THE DATA AND INFORMATION PROVIDED LISTED IN NOTES 2 AND 3, ONLY THE RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED TO THE LEASE BOUNDARIES.
  5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.

### PAD LAYOUT



NOT TO SCALE

**NOTE:**  
 1 WATER WELL WAS LOCATED WITHIN 2000' OF THE CENTER OF PAD



JOB # **14-127WA**  
 DRAWING # **KAREN1HAD**  
 SCALE **1" = 2000'**  
 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



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

**LEGEND**

- Surface Owner Boundary Lines +/-
- Interior Surface Tracts +/-
- Proposed Well Path
- As Drilled Well Path

THOMAS SUMMERS P.S. 2109  
 DATE **11/20/19**  
 OPERATOR'S WELL# **KAREN UNIT #1H**

WELL TYPE: OIL \_\_\_ GAS **X** LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS") PRODUCTION **X** STORAGE \_\_\_ DEEP \_\_\_ SHALLOW **X**

LOCATION: ELEVATION **945.5' AS BUILT** WATERSHED **SOUTH FORK HUGHES RIVER**  
 QUADRANGLE **PULLMAN 7.5'** DISTRICT **UNION** COUNTY **RITCHIE**  
 SURFACE OWNER **LYNWOOD IRELAND ET AL** ACREAGE **144.276 ACRES +/-**

OIL & GAS ROYALTY OWNER **BELLE PRITCHARD; W. P. IRELAND ET UX; JOYCE E. WEBER; JOYCE E. WEBER; PHYLLIS JEAN KNIGHT; ZIMRY FLANAGHAN ET UX; EARL E. FLESHER ET AL; DONALD C. MORRIS ET AL; EARL E. FLESHER; LYNWOOD IRELAND ET UX; ELSIE O. BONNELL ET AL; CAROLYN ERCANBRACK**  
 LEASE ACREAGE **416 AC; 722 AC; 445.67 AC; 69.84 AC; 33 AC; 671.17 AC; 57 AC; 24.37 AC; 82 AC; 27.75 AC; 84.25 AC; 64.5 AC**

PROPOSED WORK: DRILL \_\_\_ CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE **X**  
 PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW FORMATION \_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) **AS DRILLED** PLUG & ABANDON \_\_\_ CLEAN OUT & REPLUG \_\_\_  
 TARGET FORMATION **MARCELLUS** ESTIMATED DEPTH **6,323' TVD 19,850' MD**

WELL OPERATOR **ANTERO RESOURCES CORP.** DESIGNATED AGENT **DIANNA STAMPER**  
 ADDRESS **1615 WYNKOOP STREET** ADDRESS **5400 D BIG TYLER ROAD**  
**DENVER, CO 80202** **CHARLESTON, WV 25313**

FORM WW-6



LATITUDE 39°12'30"

6,908'

LATITUDE 39°10'00"

5,586' TO BOTTOM HOLE

LONGITUDE 80°52'30"

10,441' TO BOTTOM HOLE

12,963'

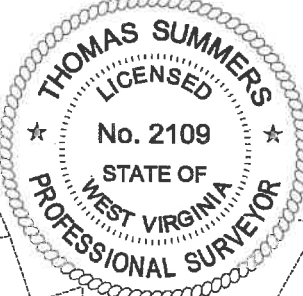
LONGITUDE 80°52'30"

# Antero Resources Corporation Well No. Karen Unit 1H

## WELL NO. 1H

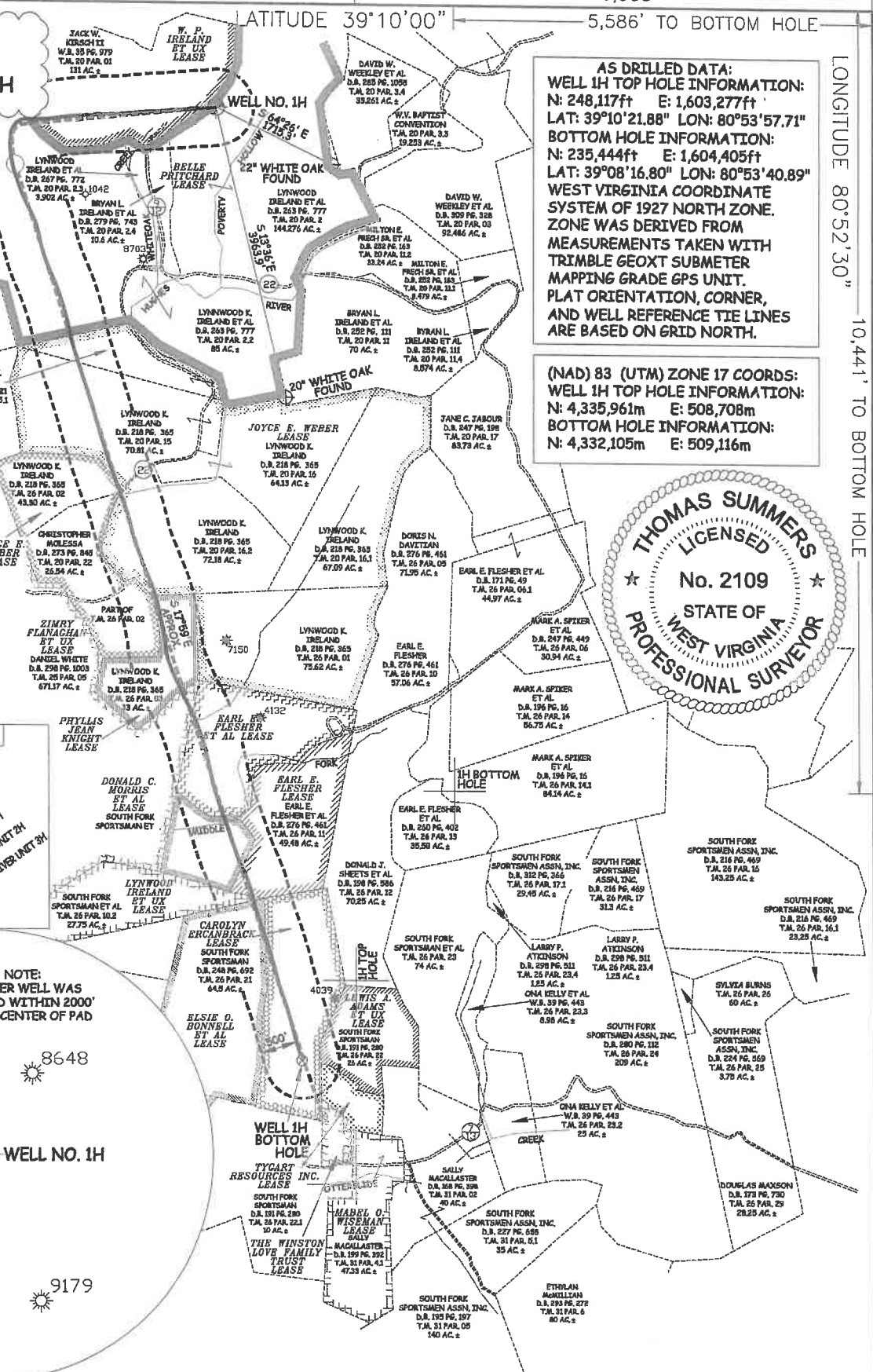
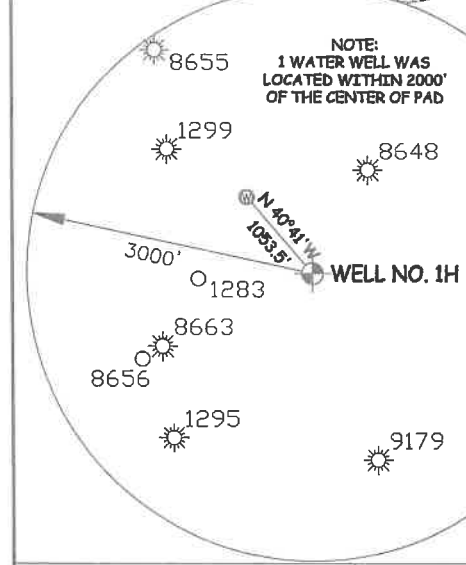
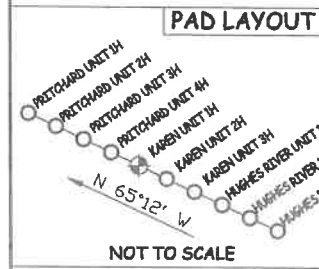
**AS DRILLED DATA:**  
**WELL 1H TOP HOLE INFORMATION:**  
 N: 248,117ft E: 1,603,277ft  
 LAT: 39°10'21.88" LON: 80°53'57.71"  
**BOTTOM HOLE INFORMATION:**  
 N: 235,444ft E: 1,604,405ft  
 LAT: 39°08'16.80" LON: 80°53'40.89"  
**WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED 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 1H TOP HOLE INFORMATION:**  
 N: 4,335,961m E: 508,708m  
**BOTTOM HOLE INFORMATION:**  
 N: 4,332,105m E: 509,116m



WV NORTH ZONE  
GRID NORTH

- NOTE**
1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY. HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.
  2. TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY
  3. AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
  4. WLS IS NOT CERTIFYING THE DATA AND INFORMATION PROVIDED LISTED IN NOTES 2 AND 3, ONLY THE RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED TO THE STATE BOUNDARIES.
  5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.



JOB # **14-127WA**  
 DRAWING # **KAREN1HAD**  
 SCALE **1" = 2000'**  
 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

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



**LEGEND**

- Surface Owner Boundary Lines +/-
- Interior Surface Tracts +/-
- Proposed Well Path
- As Drilled Well Path

THOMAS SUMMERS P.S. 2109  
 DATE **11/20/19**  
 OPERATOR'S WELL# **KAREN UNIT #1H**

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL   
 (IF "GAS") PRODUCTION  STORAGE  DEEP  SHALLOW   
 LOCATION: ELEVATION **945.5' AS BUILT** WATERSHED **SOUTH FORK HUGHES RIVER**  
 QUADRANGLE **PULLMAN 7.5'** DISTRICT **UNION** COUNTY **RITCHIE**  
 SURFACE OWNER **LYNWOOD IRELAND ET AL** ACREAGE **144.276 ACRES +/-**  
 OIL & GAS ROYALTY OWNER **BELLE PRITCHARD; W. P. IRELAND ET UX; JOYCE E. WEBER; JOYCE E. WEBER; PHYLLIS JEAN KNIGHT; ZIMRY FLANAGHAN ET UX; EARL E. FLESHER ET AL; DONALD C. MORRIS ET AL; EARL E. FLESHER; LYNWOOD IRELAND ET UX; ELSIE O. BONNELL ET AL; CAROLYN ERCANBRACK** LEASE ACREAGE **415 AC; 222 AC; 445.67 AC; 69.84 AC; 33 AC; 671.17 AC; 57 AC; 24.37 AC; 82 AC; 27.75 AC; 84.25 AC; 64.5 AC**  
 PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE   
 PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) **AS DRILLED** PLUG & ABANDON  CLEAN OUT & REPLUG   
 TARGET FORMATION **MARCELLUS** ESTIMATED DEPTH **6,323' TVD 19,850' MD**  
 WELL OPERATOR **ANTERO RESOURCES CORP.** DESIGNATED AGENT **DIANNA STAMPER**  
 ADDRESS **1615 WYNKOOP STREET** ADDRESS **CT CORPORATION SYSTEM**  
**DENVER, CO 80202** **5400 D BIG TYLER ROAD**  
**CHARLESTON, WV 25313**

COUNTY NAME PERMIT