

LATITUDE 39°22'30"

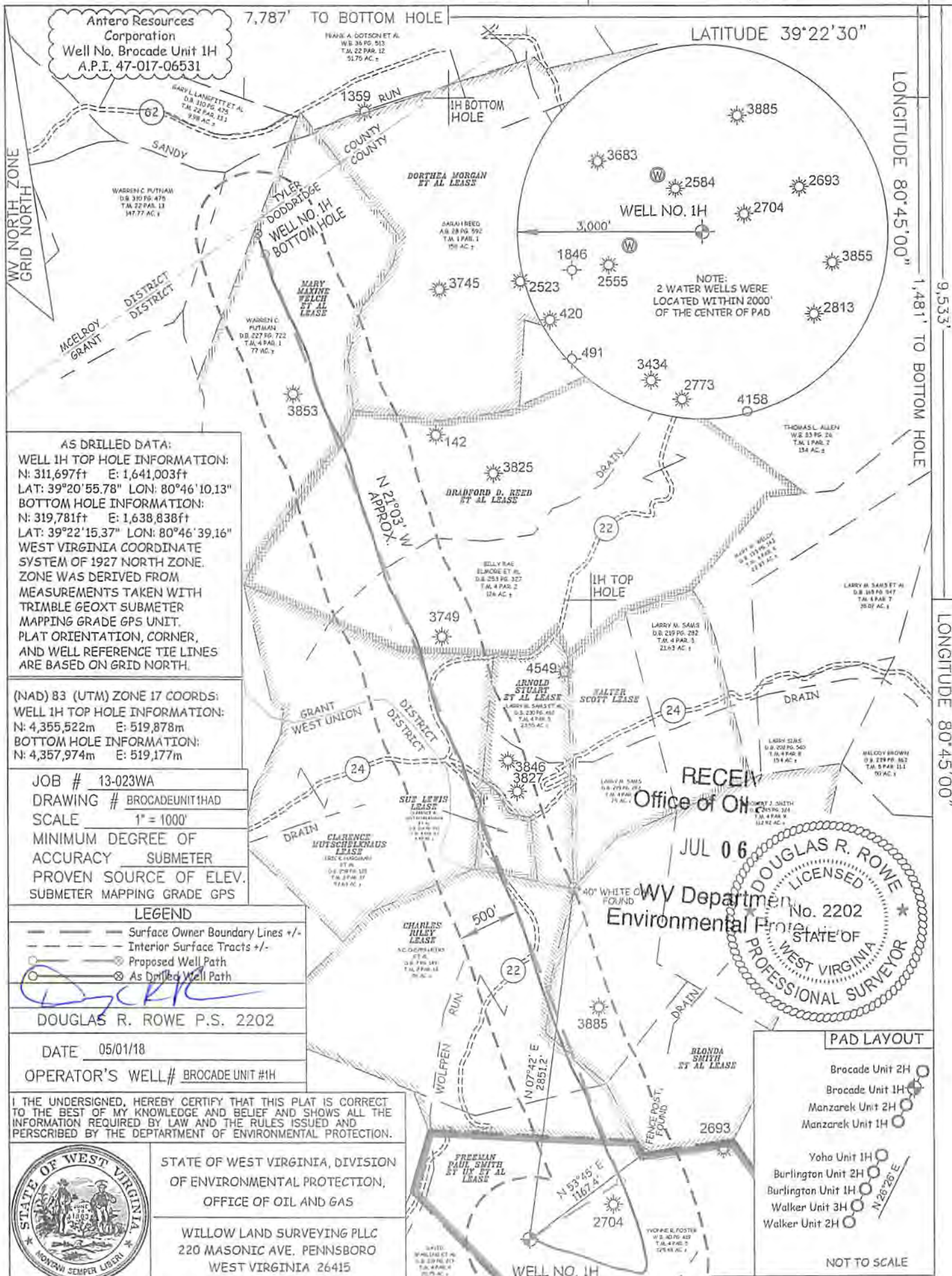
5,509'

LATITUDE 39°22'30"

LONGITUDE 80°45'00"

1,481' TO BOTTOM HOLE

LONGITUDE 80°45'00"



AS DRILLED DATA:  
 WELL 1H TOP HOLE INFORMATION:  
 N: 311,697ft E: 1,641,003ft  
 LAT: 39°20'55.78" LON: 80°46'10.13"  
 BOTTOM HOLE INFORMATION:  
 N: 319,781ft E: 1,638,838ft  
 LAT: 39°22'15.37" LON: 80°46'39.16"  
 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: 4,355,522m E: 519,878m  
 BOTTOM HOLE INFORMATION:  
 N: 4,357,974m E: 519,177m

JOB # 13-023WA  
 DRAWING # BROCADEUNIT1HAD  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY SUBMETER  
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

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

DOUGLAS R. ROWE P.S. 2202

DATE 05/01/18  
 OPERATOR'S WELL# BROCADE UNIT #1H

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.

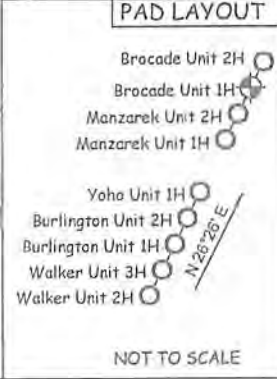


STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
 WILLOW LAND SURVEYING PLLC  
 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

STATE OF WEST VIRGINIA API WELL # 47 - 017 - 06531  
 DEPARTMENT OF ENERGY  
 DIVISION OF OIL AND GAS STATE COUNTY PERMIT  
 WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL  
 (IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X  
 LOCATION: ELEVATION 1,229' AS DRILLED WATERSHED HEADWATERS MIDDLE ISLAND CREEK  
 QUADRANGLE WEST UNION 7.5' DISTRICT WEST UNION COUNTY DODDRIDGE  
 SURFACE OWNER YVONNE R. FOSTER ACREAGE 125.48 ACRES +/-  
 OIL & GAS ROVINY OWNER FREEMAN PAUL SMITH ET UX ET AL; CHARLES RILEY; BLONDA SMITH ET AL; SUE LEWIS;  
 CLARENCE MUTSCHELKNAUS; BRADFORD D. REED ET AL; MARY MAXINE WELCH ET AL  
 LEASE ACREAGE 125 AC±; 78 AC±; 114 AC±; 4.45 AC±; 92.63 AC±; 126 AC±; 78.973 AC±

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 ALLEGHENY SURVEYS, INC.  
 3. AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.  
 4. WLS IS NOT CERTIFYING THE DATA AND INFORMATION PROVIDED UNDER THIS PERMIT.  
 5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE  
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL  
 (SPECIFY) AS DRILLED PLUG & ABANDON CLEAN OUT & REPLUG  
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,919' TVD 15,771' MD  
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT CT CORPORATION SYSTEM-DIANNA STAMPER  
 ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD  
 FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313



COUNTY NAME PERMIT

07/20/2018