

LATITUDE 39°20'00"

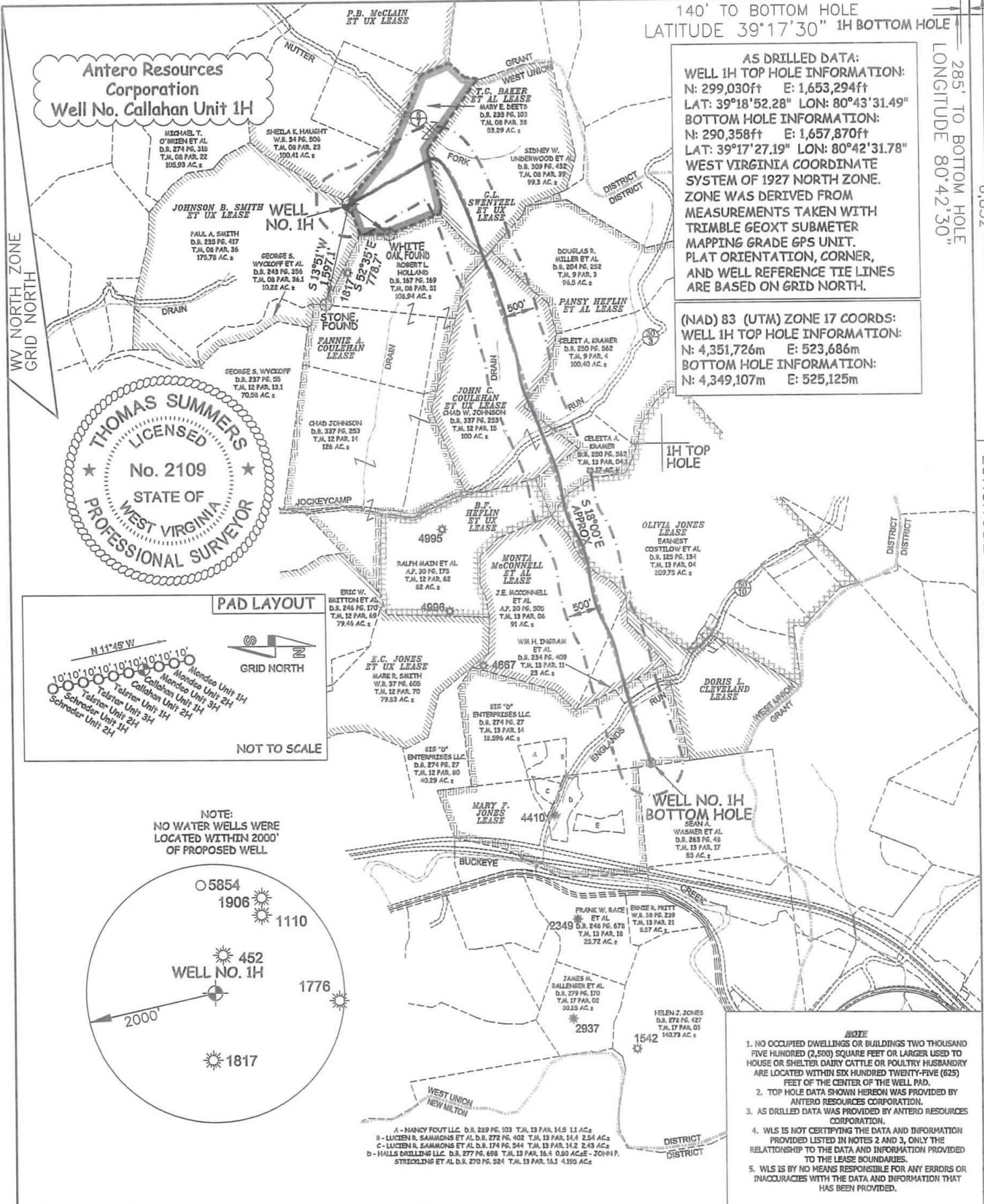
4,833'

140' TO BOTTOM HOLE
LATITUDE 39°17'30" 1H BOTTOM HOLE

285' TO BOTTOM HOLE
LONGITUDE 80°42'30"

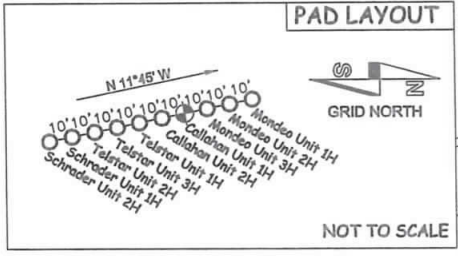
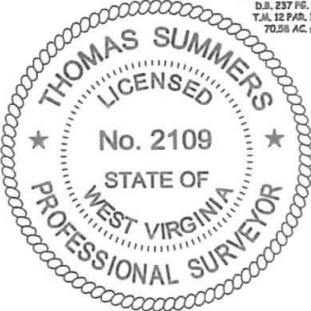
6,852'

LONGITUDE 80°42'30"

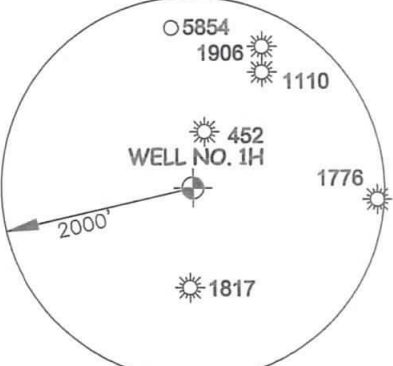


AS DRILLED DATA:
 WELL 1H TOP HOLE INFORMATION:
 N: 299,030ft E: 1,653,294ft
 LAT: 39°18'52.28" LON: 80°43'31.49"
 BOTTOM HOLE INFORMATION:
 N: 290,358ft E: 1,657,870ft
 LAT: 39°17'27.19" LON: 80°42'31.78"
 WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE.
 ZONE WAS DERIVED FROM MEASUREMENTS TAKEN 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: 4,351,726m E: 523,686m
 BOTTOM HOLE INFORMATION:
 N: 4,349,107m E: 525,125m



NOTE:
 NO WATER WELLS WERE LOCATED WITHIN 2000' OF PROPOSED WELL



- 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 ANTERO RESOURCES CORPORATION.
 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.

JOB # 13-028WA
 DRAWING # CALLAHAN1HAD
 SCALE 1" = 2000'
 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 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 +/-
 O - - - - - Proposed Well Path
 O - - - - - As Drilled Well Path

THOMAS SUMMERS P.S. 2109
 DATE 04/16/20
 OPERATOR'S WELL # CALLAHAN UNIT #1H

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS
 WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X
 LOCATION: ELEVATION 1,376' -AS BUILT WATERSHED HEADWATERS MIDDLE ISLAND CREEK
 QUADRANGLE SMITHBURG 7.5' DISTRICT WEST UNION COUNTY DODDRIDGE
 SURFACE OWNER MARY E. DEETS AND/OR PAUL A. SMITH ACREAGE 53.29 ACRES +/- AND/OR 175.78 ACRES±
 OIL & GAS ROYALTY OWNER JOHNSON B. SMITH ET UX; T.G. BAKER ET AL; G.L. SWENTZEL ET UX; FANNIE A. COULEHAN; JOHN C. COULEHAN ET UX; PANSY HEFLIN ET AL; OLIVIA JONES; MONTA McCONNELL ET AL; MARY F. JONES LEASE ACREAGE 180 ACRES±; 53.46 ACRES±; 103 ACRES±; 250 ACRES±; 118 ACRES±; 222.5 ACRES±; 260 ACRES±; 114 ACRES±; 194 ACRES±
 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 7,099' TVD 17,113' MD
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPLER - CT CORPORATION SYSTEM
 ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
 DENVER, CO 80202 CHARLESTON, WV 25313

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

DATE 04/16/20
 OPERATOR'S WELL # CALLAHAN UNIT #1H
 API WELL # 47 - 017 - 06873
 STATE COUNTY PERMIT
 COUNTY NAME WEST UNION
 PERMIT