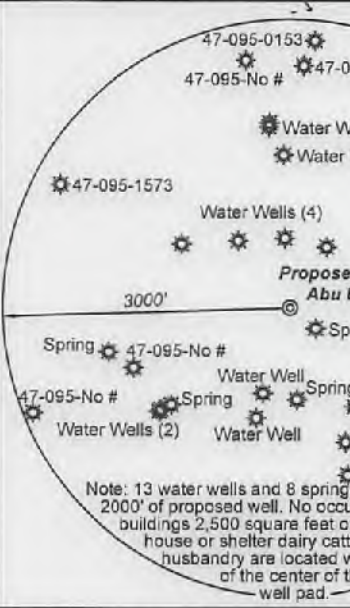


**Antero Resources**  
Well No. Abu Unit 4H  
Antero Resources Corporation

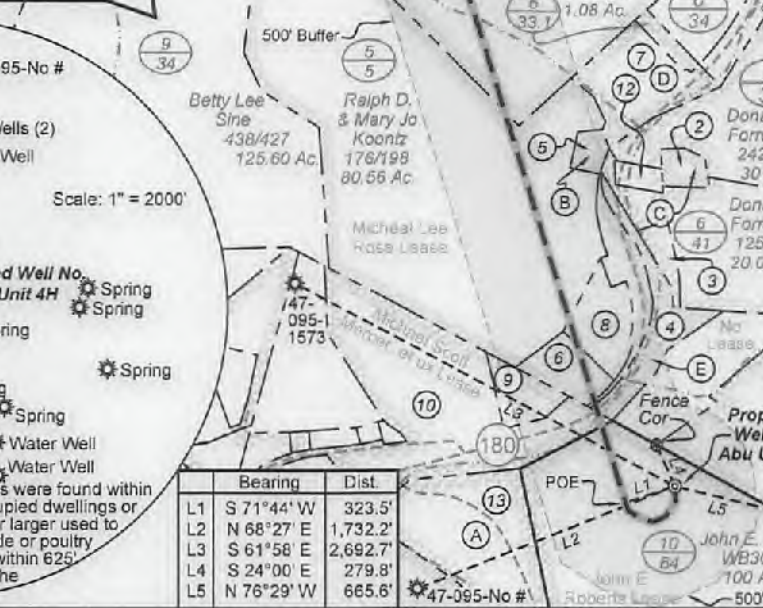
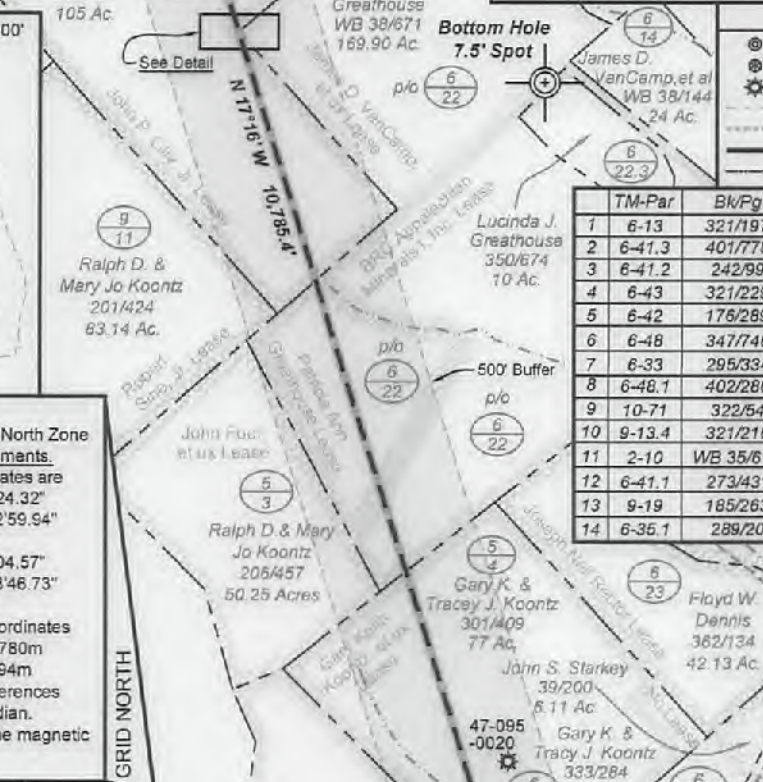
**KENNETH J. PLUM**  
LICENSED  
No. 2216  
STATE OF WEST VIRGINIA  
PROFESSIONAL SURVEYOR

**Well Location References** Scale: 1" = 400'

**Notes:**  
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.  
Well No. Abu Unit 4H Top Hole coordinates are  
N: 381,825.59' Longitude: 80°32'24.32"  
E: 1,809,886.58' Longitude: 80°52'59.94"  
Bottom Hole coordinates are  
N: 392,023.81' Longitude: 39°34'04.57"  
E: 1,806,378.94' Longitude: 80°53'46.73"  
UTM Zone 17, NAD 1983  
Top Hole Coordinates Bottom Hole Coordinates  
N: 4,376,728.690m N: 4,379,817.780m  
E: 510,041.493m E: 508,921.094m  
Plat orientation and corner and well references are based upon the grid north meridian.  
Well location references are based upon the magnetic meridian.



James A. Cochran 344/254 50.02 Ac.  
Abu Unit 4H Bottom Hole  
500' Buffer  
A. William G. Stuart Lease  
B. John S. Starkey Lease  
C. Elizabeth B. Troesch Lease  
D. Gary Keith Koontz, et ux Lease  
E. BRC Appalachian Minerals I, LLC Lease  
Rosalie B. Henry WB 35/616 61.54 Ac.  
Bottom Hole 7.5' Spot  
2,354' to Top Hole  
6,094' to Bottom Hole  
Top Hole 7.5' Spot  
BTM HOLE LATITUDE 39 - 35 - 00  
TOP HOLE LATITUDE 39 - 32 - 30  
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 prescribed by the Department of Environmental Protection.  
Kenneth J. Plum, P.S. 2216  
(+ ) Denotes Location of Well on United States Topographic Maps



**ALLEGHENY SURVEYS, INC.**

LONGITUDE 80 - 52 - 30  
5,515' to Bottom Hole  
539' to Top Hole

**Legend**

- Proposed gas well
- Found corner, as noted
- Existing Well, as noted
- Creek or Drain
- Existing Road
- Surface boundary (approx.)
- Interior surface tracts (approx.)

**Wellhead Layout**  
Detail Not to Scale

- Shimano Unit 4H
- Shimano Unit 3H
- Shimano Unit 2H
- Shimano Unit 1H
- Garcia Unit 3H
- Garcia Unit 2H
- Garcia Unit 1H
- Penn Unit 3H
- Penn Unit 2H
- Penn Unit 1H
- Abu Unit 1H
- Abu Unit 2H
- Abu Unit 3H
- Proposed Abu Unit 4H

**Notes:**  
Well No. Abu Unit 4H  
UTM Zone 17, NAD 1927  
Top Hole Coordinates  
N: 14,358,603.02' E: 1,873,313.25'  
Point of Entry Coordinates  
N: 14,358,496.53' E: 1,873,007.85'  
Bottom Hole Coordinates  
N: 14,368,737.80' E: 1,869,637.09'

FILE NO: 32-54-E-16  
DRAWING NO: Abu 4H Well Plat  
SCALE: 1" = 1200'  
MINIMUM DEGREE OF ACCURACY: Submeter  
PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV

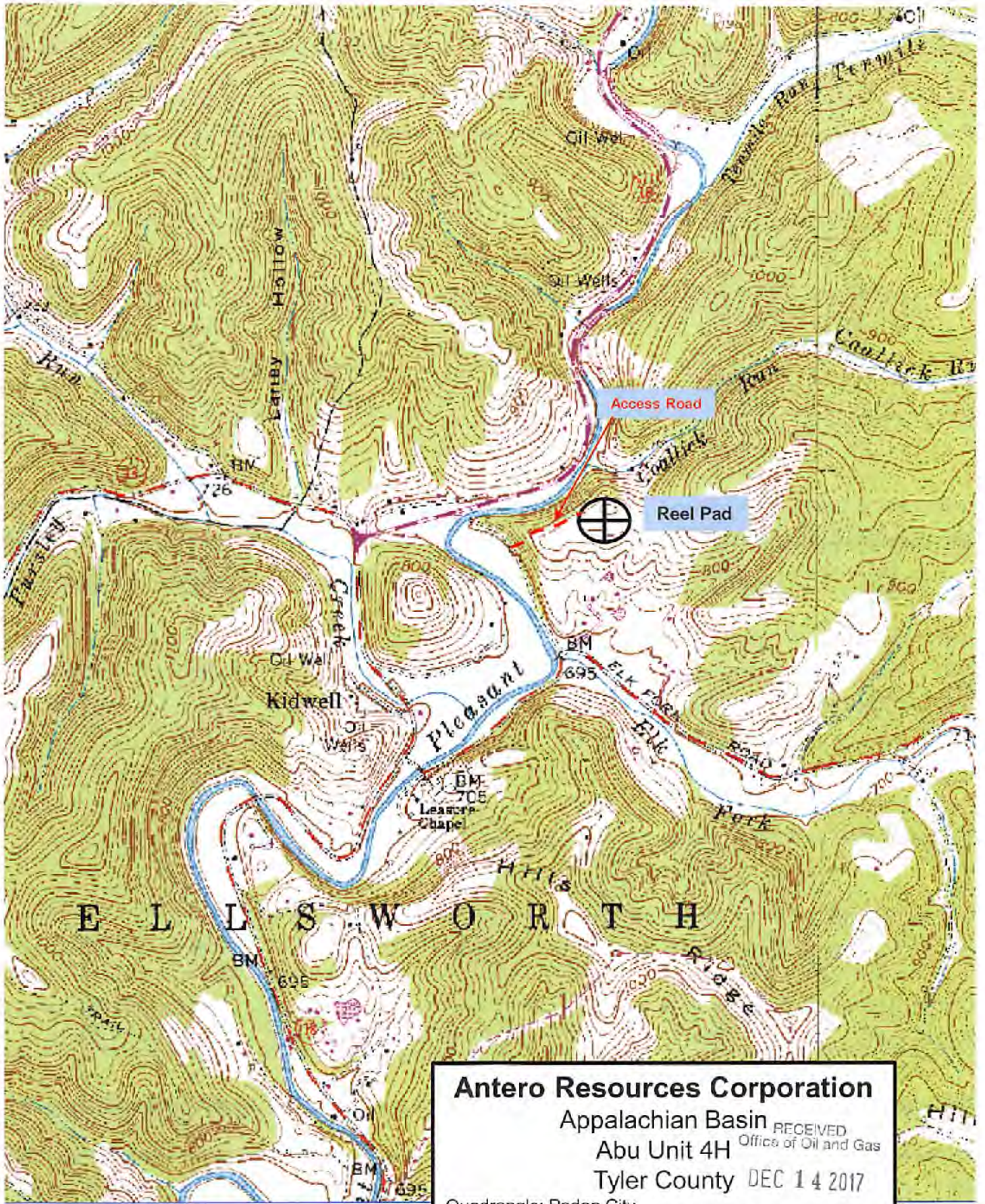
**STATE OF WEST VIRGINIA**  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**OIL AND GAS DIVISION**

DATE: November 1, 2017  
OPERATOR'S WELL NO. Abu Unit 4H  
API WELL NO. 47 - 095 - 02493  
STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
Existing Grade - 853'  
LOCATION: ELEVATION: Proposed Grade - 850' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Paden City  
DISTRICT: Ellsworth COUNTY: Tyler  
SURFACE OWNER: John E. Roberts John P. Lilly Jr.; Donald H. Binegar, et ux; Patricia Ann Greathouse ACREAGE: 100 2; 35.66  
Gary Keith Koontz et ux; BRC Appalachian Minerals I, LLC; Michael Lee Rose 77.31; 101.8; 25.01  
ROYALTY OWNER: John E. Roberts; Michael Scott Mercer et ux; BRC Appalachian Minerals I, Inc. LEASE NO: ACREAGE: 105; 100; 14.38; 80.57  
PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY)  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 18,700' MD 6,500' TVD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System  
ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road  
Denver, CO 80202 Charleston, WV 25313





**Antero Resources Corporation**  
 Appalachian Basin  
 Abu Unit 4H  
 Tyler County

RECEIVED  
 Office of Oil and Gas  
 DEC 14 2017

WV Department of  
 Environmental Protection

Quadrangle: Paden City  
 Watershed: Outlet Middle Island Creek  
 District: Ellsworth  
 Date: 10-11-2017