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west virginia department of environmental protection

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

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
www.dep.wv.gov

## PERMIT MODIFICATION APPROVAL

December 09, 2014

ANTERO RESOURCES CORPORATION  
1615 WYNKOOP STREET  
DENVER, CO 80202

Re: Permit Modification Approval for API Number 1706518 , Well #: OUTBACK UNIT 1H  
**Move bottom hole.**

Oil and Gas Operator:

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.

Please call James Martin at 304-926-0499, extension 1654 if you have any questions.

Sincerely,

Gene Smith  
Assistant Chief of Permitting  
Office of Oil and Gas



October 1, 2014

Antero Resources  
1615 Wynkoop Street  
Denver, CO 80202  
Office 303.357.7310  
Fax 303.357.7315

West Virginia Department of Environmental Protection  
Office of Oil and Gas  
Attn: Ms. Laura Cooper  
601 57<sup>th</sup> Street  
Charleston, WV 25304

Ms. Laura Cooper:

Antero Resources Corporation (Antero) would like to submit the following permit modifications for two approved wells on the Cofor Pad. We are requesting to slightly move the horizontal laterals which will change the bottom hole locations of the Outback Unit 1H (API# 47-017-06518) and Outback Unit 2H (API# 47-017-06519). Please note that the Leases (Form WW-6A1) and Measured Depths (Form WW-6B) are the same as originally permitted, so updated forms have not been included.

Attached you will find the following documents:

- REVISED Mylar Plats, which show the new lateral and bottom hole locations

If you have any questions please feel free to contact me at (303) 357-7323.

Thank you in advance for your consideration.

Sincerely,

A handwritten signature in blue ink that reads "Ashlie Steele".

Ashlie Steele  
Permitting Supervisor  
Antero Resources Corporation

Enclosures

Received  
Office of Oil & Gas  
OCT 06 2014

12/12/14



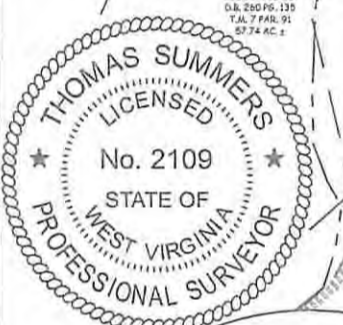
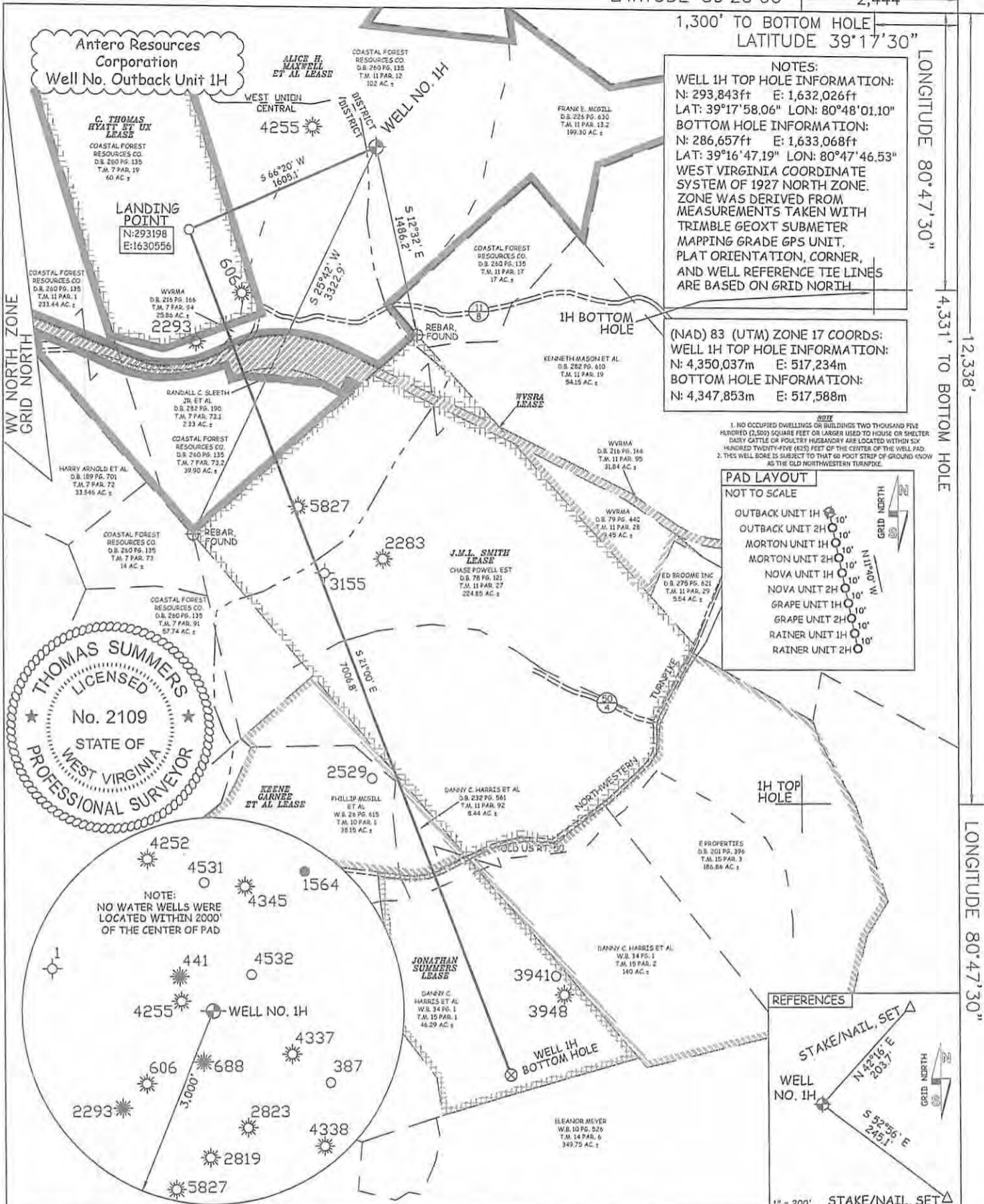
LATITUDE 39°20'00" 2,444'

1,300' TO BOTTOM HOLE  
LATITUDE 39°17'30"

LONGITUDE 80°47'30"

12,338'

LONGITUDE 80°47'30"



JOB # 14-037WA  
DRAWING # OUTBACK1HR  
SCALE 1" = 1000'  
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 +/-  
X Existing Fence  
⊕ Found monument, as noted

THOMAS SUMMERS P.S. 2109

DATE 08/04/14

OPERATOR'S WELL # OUTBACK UNIT #1H  
API WELL # 47 - 017 - 06578  
STATE COUNTY PERMIT

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 1,189' WATERSHED TRIBUTARY OF ARNOLD CREEK  
QUADRANGLE WEST UNION 7.5' DISTRICT WEST UNION COUNTY DODDRIDGE  
SURFACE OWNER COASTAL FOREST RESOURCES COMPANY ACREAGE 102 ACRES ±  
OIL & GAS ROYALTY OWNER ALICE H. MAXWELL ET AL; C. THOMAS HYATT ET UX; WVSRA; J.M.L. SMITH; KEENE GARNEE ET AL; JONATHAN SUMMERS LEASE ACREAGE 301.19 ACRES ±; 404 ACRES ±; 404 ACRES ±; 55 ACRES ±  
PROPOSED WORK: DRILL X CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE X  
PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL (SPECIFY) Permit Modification - BTL  
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 7,900' TVD 16,900' 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