



west virginia department of environmental protection

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

March 01, 2016

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET
DENVER, CO 80202

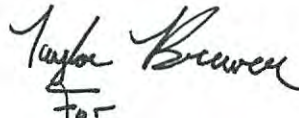
Re: Permit Modification Approval for API Number 9502308, Well #: JOHNSTON UNIT 3H

SHL Location Changed

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, 
for

Gene Smith
Assistant Chief of Permitting
Office of Oil and Gas

Promoting a healthy environment.

03/04/2016



February 1, 2016

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: Mr. Taylor Brewer
601 57th Street
Charleston, WV 25304

Mr. Brewer:

Antero Resources Corporation (Antero) would like to submit the following permit modification for one approved well on the Dale Pad. We are requesting to slightly change the surface hole location of the Johnston Unit 3H (API# 47-095-02308). The Dale Pad will not change from what was originally approved, and there will be no additional disturbance associated with this requested modification. Please note that the casing program is the same as submitted and approved in the original permit application.

Attached you will find the following documents:

- REVISED Mylar Plat, which shows the new surface hole location
- REVISED Exhibit 7: Well Pad Surface Diagram, which shows the changes to the Dale Pad Site Safety Plan Collision Avoidance Plan

If you have any questions please feel free to contact me at (303) 357-6820.

Thank you in advance for your consideration.

Sincerely,

A handwritten signature in blue ink that reads "Natalie Komp".

Natalie Komp
Permitting Agent
Antero Resources Corporation

Enclosures

470950 Mod

Received
Office of Oil & Gas
FEB 03 2016

03/04/2016



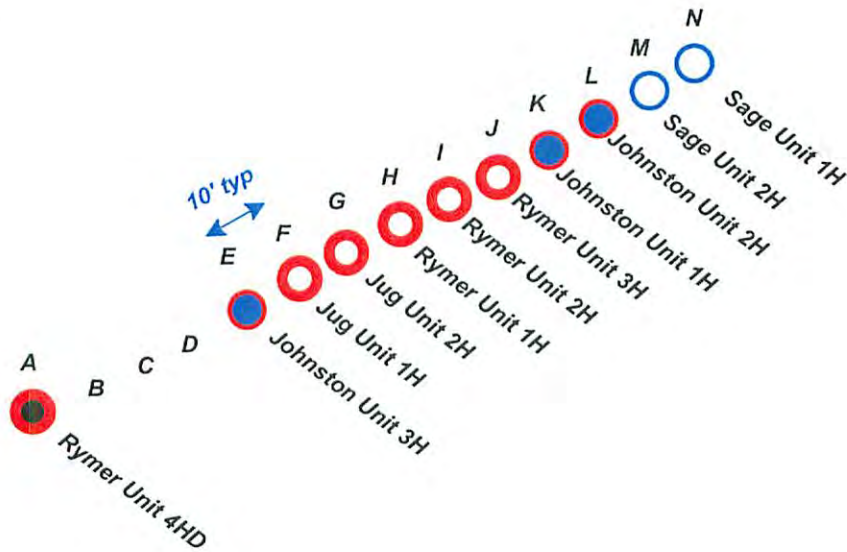
WELL NAME	API NUMBER	WELL STATUS
Sage Unit 1H	Proposed Well	Future Well
Sage Unit 2H	Proposed Well	Future Well
Johnston Unit 2H	47-095-02306	Permitted Well - Modified
Johnston Unit 1H	47-095-02307	Permitted Well - Modified
Rymer Unit 3H	47-095-02275	Permitted Well
Rymer Unit 2H	47-095-02270	Permitted Well
Rymer Unit 1H	47-095-02269	Permitted Well
Jug Unit 2H	47-095-02171	Permitted Well
Jug Unit 1H	47-095-02265	Permitted Well
Johnston Unit 3H	47-095-02308	Permitted Well - Modified
Rymer Unit 4HD	47-095-02273	Permitted Well

Dale Pad

Legend

- Existing
- Permitted
- Proposed
- Modified

1/28/16



4709502308 Mod

Received
Office of Oil & Gas
FEB 03 2016

03/04/2016

LATITUDE 39°27'30"

8,314'

5,785' TO BOTTOM HOLE

LATITUDE 39°25'00"

LONGITUDE 80°50'00"

LONGITUDE 80°50'00"

Antero Resources Corporation
Well No. Johnston Unit 3H

WILLIE R. LESTER
D.B. 326 PG. 402
T.M. 04 PAR. 07
97.75 AC. ±

ROBERT L. RIPLEY ET AL
D.B. 327 PG. 77
T.M. 04 PAR. 06.2
18.75 AC. ±

RAYMOND UNDERWOOD
W.B. 28 PG. 70
T.M. 04 PAR. 12
76.5 AC. ±

RAYMOND V. UNDERWOOD ET UX LEASE

REGINA H. BERTOZZI ET AL
D.B. 334 PG. 420
T.M. 04 PAR. 08.3
41.86 AC. ±

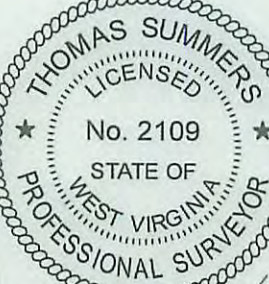
RAYMOND UNDERWOOD
D.B. 114 PG. 272
T.M. 04 PAR. 13
96 AC. ±

NOTES:
WELL 3H TOP HOLE INFORMATION:
N: 342,355ft E: 1,615,084ft
LAT: 39°25'55.02" LON: 80°51'45.96"
BOTTOM HOLE INFORMATION:
N: 335,519ft E: 1,617,511ft
LAT: 39°24'47.83" LON: 80°51'13.71"
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 3H TOP HOLE INFORMATION:
N: 4,364,730m E: 511,825m
BOTTOM HOLE INFORMATION:
N: 4,362,660m E: 512,600m

NOTE
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.

WV NORTH ZONE
GRID NORTH



W.V.D.N.R. LEASE

STATE OF WV DNR
D.B. 156 PG. 54
T.M. 04 PAR. 14
244.25 AC. ±

ROBERT JOHNSTON
D.B. 207 PG. 47
T.M. 08 PAR. 2.1
3.5 AC. ±

FORREST E. LEASEBURG ET UX LEASE

WILLIAM LEASEBURG ET UX
D.B. 408 PG. 210
T.M. 08 PAR. 02
77.25 AC. ±

EDNA MONROE
D.B. 407 PG. 528
T.M. 08 PAR. 3.4
37.51 AC. ±

ROBERT JOHNSTON
D.B. 322 PG. 371
T.M. 08 PAR. 09
68.31 AC. ±

JOHN GRAFF ET UX LEASE

W.V. CONSERVATION COMMISSION
D.B. 156 PG. 353
T.M. 08 PAR. 22
111.41 AC. ±

EATHEL JOHNSTON LEASE

RITA J. HITCHCOCK LEASE

ROBERT LEASURE ET UX
D.B. 222 PG. 191
T.M. 08 PAR. 08
50 AC. ±

ROBERT JOHNSTON
D.B. 322 PG. 371
T.M. 08 PAR. 9.2
33.51 AC. ±

JAMES L. HOWARD ET AL
D.B. 297 PG. 95
T.M. 08 PAR. 10
68.31 AC. ±

MARY LOU WELLS
D.B. 334 PG. 526
T.M. 08 PAR. B.1
84.25 AC. ±

1360

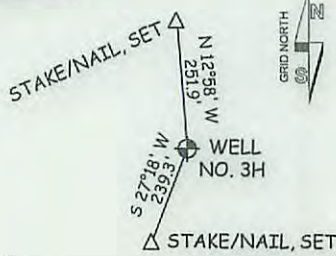
BOTTOM HOLE WELL 3H

LILLIE H. MAPLE ET AL LEASE

RALPH J. UNDERWOOD ET AL
D.B. 184 PG. 443
T.M. 08 PAR. 15
74.452 AC. ±

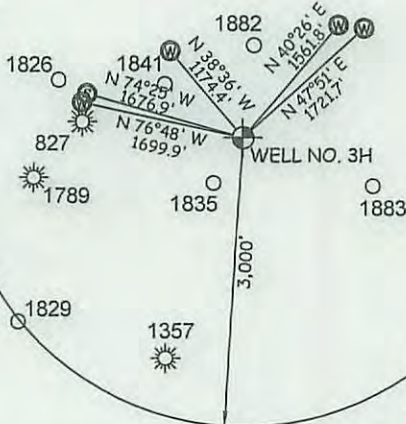
A = LOREN E. BAGLEY D.B. 349 PG. 284 T.M. 8 PAR 3.1
B = LOREN E. BAGLEY D.B. 349 PG. 284 T.M. 8 PAR 3.3
C = ARLIT ARBOGAST D.B. 376 PG. 826 T.M. 8 PAR 3.2
D = DAVID D. CHIPPS D.B. 290 PG. 682 T.M. 8 PAR 3.5

REFERENCES



1" = 400'

NOTE:
4 WATER WELLS AND 1 SPRING WERE LOCATED WITHIN 2000' OF CENTER OF PAD



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

JOB # 15-034WA
DRAWING # JOHNSTON3HR1
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

LEGEND

- Surface Owner Boundary Lines +/-
- Interior Surface Tracts +/-
- Existing Fence
- Found monument, as noted

THOMAS SUMMERS P.S. 2109

DATE 01/28/16

OPERATOR'S WELL # JOHNSTON UNIT #3H

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ 47 - 095 - 02308 HGA
(IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X STATE COUNTY PERMIT
LOCATION: ELEVATION 1,036' ORIGINAL - 1,017' PROPOSED WATERSHED HEADWATERS MIDDLE ISLAND CREEK 03/04/2016

QUADRANGLE SHIRLEY 7.5' DISTRICT CENTERVILLE COUNTY TYLER
SURFACE OWNER RAYMOND UNDERWOOD ACREAGE 96 ACRES +/-
OIL & GAS ROYALTY OWNER RAYMOND V. UNDERWOOD ET UX; W.V.D.N.R.; LEASE ACREAGE 96 ACRES±; 244.25 ACRES±;
EATHEL JOHNSTON; LILLIE H. MAPLE ET AL 108 ACRES±; 341 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) PLUG & ABANDON CLEAN OUT & REPLUG
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,700' TVD 14,400' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

LATITUDE 39°27'30"

8,314'

LATITUDE 39°25'00"

LONGITUDE 80°50'00"

9,610'

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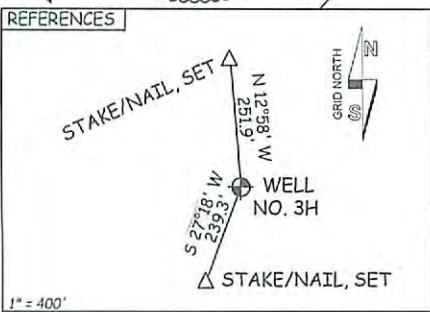
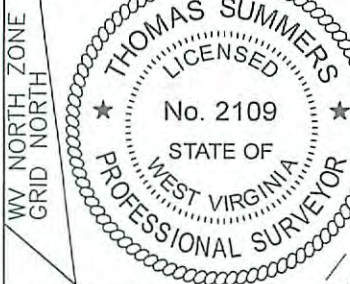
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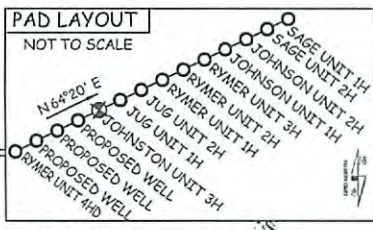
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