



west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Tuesday, June 26, 2018
PERMIT MODIFICATION APPROVAL
Horizontal 6A / Horizontal 6A Well - 1

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for DEULLEY UNIT 1H
47-095-02359-00-00

Lateral Extension

ANTERO RESOURCES CORPORATION

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.

If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin
Chief

Operator's Well Number: DEULLEY UNIT 1H
Farm Name: MONROE, EDNA
U.S. WELL NUMBER: 47-095-02359-00-00
Horizontal 6A Horizontal 6A Well - 1
Date Modification Issued: June 26, 2018

Promoting a healthy environment.



May 10, 2018

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 Adkins
601 57th Street
Charleston, WV 25304

Ms. Laura Adkins:

Antero Resources Corporation (Antero) would like to submit the following permit modifications for one approved well on the existing Edna Monroe Pad. We are requesting change the point of entry which will change the horizontal leg length, Total Measured Depth, and Total Vertical Depth for the Deulley Unit 1H (API# 47-095-02359).

Attached you will find the following documents:

- REVISED Form WW-6B, which shows the revised Horizontal Leg Length, Measured Depth, and Production Casing/Cement Program
- REVISED Form WW-6A1, which shows the new leases we will be drilling into
- REVISED Mylar Plat, which shows the new wellbore path.

If you have any questions please feel free to contact me at (303) 357-7182.

Thank you in advance for your consideration.

Sincerely,

A handwritten signature in blue ink, appearing to read "Mallory Stanton", is written over a light blue horizontal line.

Mallory Stanton
Permitting Supervisor
Antero Resources Corporation

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Enclosures

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

1) Well Operator: Antero Resources Corporation 494507062 095 - Tyler Centerville Shirley 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Deulley Unit 1H Well Pad Name: Edna Monroe Pad

3) Farm Name/Surface Owner: Edna Monroe Public Road Access: CR 48

4) Elevation, current ground: 1044' Elevation, proposed post-construction: _____

5) Well Type (a) Gas Oil _____ Underground Storage _____

Other _____

(b) If Gas Shallow Deep _____

Horizontal

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus Shale: 6800' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2800#

8) Proposed Total Vertical Depth: 6800' TVD

9) Formation at Total Vertical Depth: Marcellus Shale

10) Proposed Total Measured Depth: 18005'

11) Proposed Horizontal Leg Length: 11167'

12) Approximate Fresh Water Strata Depths: 24', 111', 225', 399'

13) Method to Determine Fresh Water Depths: Offset well records. Depths have been adjusted according to surface elevations.

14) Approximate Saltwater Depths: 525', 1539', 2180'

15) Approximate Coal Seam Depths: 114'

16) Approximate Depth to Possible Void (coal mine, karst, other): None Anticipated

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes _____ No

(a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

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WW-6B
(04/15)

Permit Modification API# 47-095-02359
 API NO. 47- 095 - 02359
 OPERATOR WELL NO. Deulley Unit 1H
 Well Pad Name: Edna Monroe Pad

18)

CASING AND TUBING PROGRAM

TYPE	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft.)/CTS</u>
Conductor	20"	New	H-40	94#	75'	75'	CTS, 205 Cu. Ft.
Fresh Water	13-3/8"	New	J-55/H-40	54.5#/48#	450'	450' *see #19	CTS, 625 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	2500'	2500'	CTS, 1018 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110	20#	18,005'	18,005'	4543 Cu. Ft.
Tubing	2-3/8"	New	N-80	4.7#		7100'	
Liners							

TYPE	<u>Size (in)</u>	<u>Wellbore Diameter (in)</u>	<u>Wall Thickness (in)</u>	<u>Burst Pressure (psi)</u>	<u>Anticipated Max. Internal Pressure (psi)</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
Conductor	30"	24"	0.438"	1530	50	Class A	1.18
Fresh Water	13-3/8"	17-1/2"	0.38"/0.33"	2730/1730	1000	Class A	1.18
Coal	9-5/8"	12-1/4"	0.352"	3520	1500	Class A	1.18
Intermediate							
Production	5-1/2"	8-3/4" & 8-1/2"	0.361"	12,630	2500	Lead-H/POZ & Tail - H	H/POZ-1.44 & H-1.8
Tubing	2-3/8"	4.778"	0.19"	11,200			
Liners							

PACKERS

Kind:	N/A			
Sizes:	N/A			
Depths Set:	N/A			

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19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill, perforate, fracture a new horizontal shallow well and complete Marcellus Shale.
*Antero will be air drilling the fresh water string which makes it difficult to determine when freshwater is encountered, therefore we have built in a buffer for the casing setting depth which helps to ensure that all fresh water zones are covered.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

Antero plans to pump Slickwater into the Marcellus Shale formation in order to ready the well for production. The fluid will be comprised of approximately 99 percent water and sand, with less than 1 percent special-purpose additives as shown in the attached "List of Anticipated Additives Used for Fracturing or Stimulating Well."

Anticipated Max Pressure - 9300 lbs
Anticipated Max Rate - 80 bpm

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 26.44 acres

22) Area to be disturbed for well pad only, less access road (acres): 7.95 acres

23) Describe centralizer placement for each casing string:

Conductor: no centralizers
Surface Casing: one centralizer 10' above the float shoe, one on the insert float collar and one every 4th joint spaced up the hole to surface.
Intermediate Casing: one centralizer above float joint, one centralizer 5' above float collar and one every 4th collar to surface.
Production Casing: one centralizer at shoe joint and one every 3 joints to top of cement in intermediate casing.

24) Describe all cement additives associated with each cement type:

Conductor: no additives, Class A cement.
Surface: Class A cement with 2-3% calcium chloride
Intermediate: Class A cement with 1/4 lb of flake, 5 gallons of clay treat
Production: Lead cement- 50/50 Class H/Poz + 1.5% salt + 1% C-45 + 0.5% C-16a + 0.2% C-12 + 0.45% C-20 + 0.05% C-51
Production: Tail cement- Class H + 45 PPS Calcium Carbonate + 1.0% FL-160 + 0.2% ACGB-47 + 0.05% ACSA-51 + 0.2% ACR-20

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25) Proposed borehole conditioning procedures:

WV Department of
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Conductor: blowhole clean with air, run casing, 10 bbls fresh water.
Surface: blowhole clean with air, trip to conductor shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate pipe capacity + 40 bbls fresh water followed by 25 bbls bentonite mud, 10 bbls fresh water spacer.
Intermediate: blowhole clean with air, trip to surface casing shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate 40 bbls brine water followed by 10 bbls fresh water and 25 bbls bentonite mud, pump 10 bbls fresh water.
Production: circulate with 14 lb/gal NaCl mud, trip to middle of lateral, circulate, pump high viscosity sweep, trip to base of curve, pump high viscosity sweep, trip to top of curve, trip to bottom, circulate, pump high viscosity sweep, trip out, run casing, circulate 10 bbls fresh water, pump 48 bbls barite pill, pump 10 bbls fresh water followed by 48 bbls mud flush and 10 bbls water.

*Note: Attach additional sheets as needed.

LATITUDE 39°27'30"

11,304'

6,855' TO BOTTOM HOLE

LATITUDE 39°25'00"

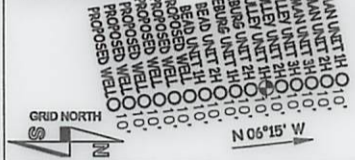
Antero Resources Corporation
Well No. Deulley Unit 1H
47-095-02359

NOTES:
WELL 1H TOP HOLE INFORMATION:
N: 339,011ft E: 1,612,044ft
LAT: 39°25'21.52" LON: 80°52'24.05"
BOTTOM HOLE INFORMATION:
N: 328,569ft E: 1,616,338ft
LAT: 39°23'38.96" LON: 80°51'27.32"
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: 4,363,696m E: 510,916m
BOTTOM HOLE INFORMATION:
N: 4,360,537m E: 512,278m

PAD LAYOUT

NOT TO SCALE



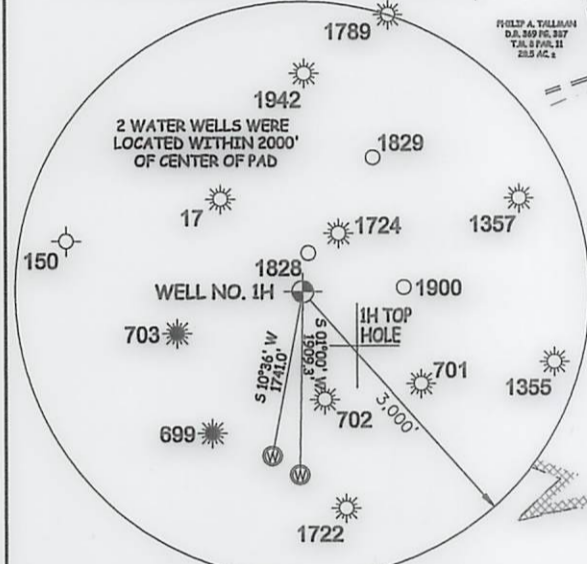
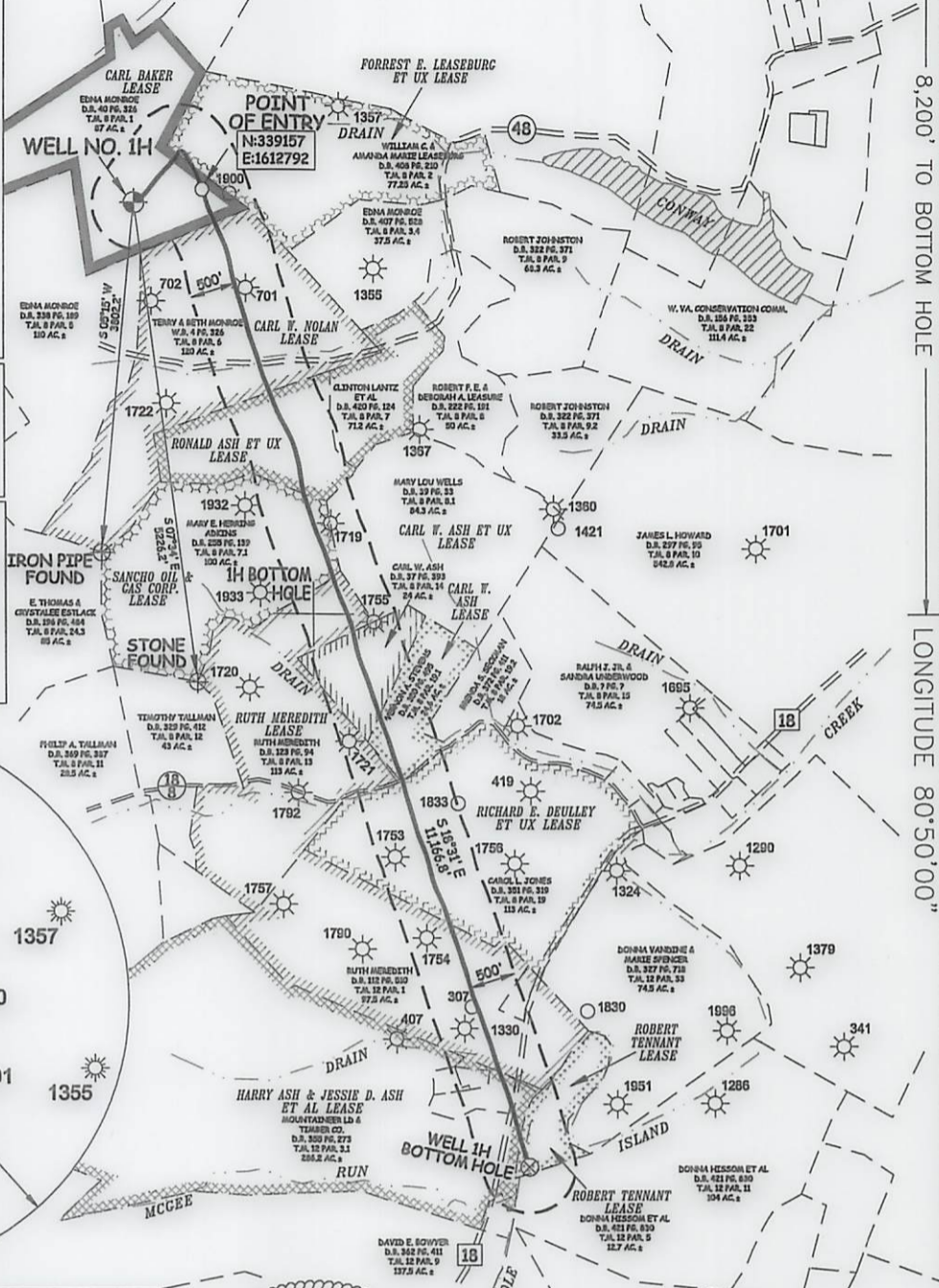
WV NORTH ZONE
GRID NORTH

8,200' TO BOTTOM HOLE

12,999'

LONGITUDE 80°50'00"

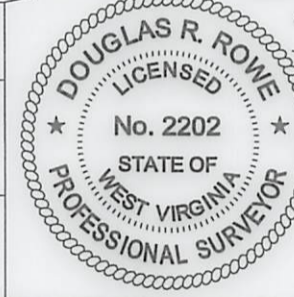
LONGITUDE 80°50'00"



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.



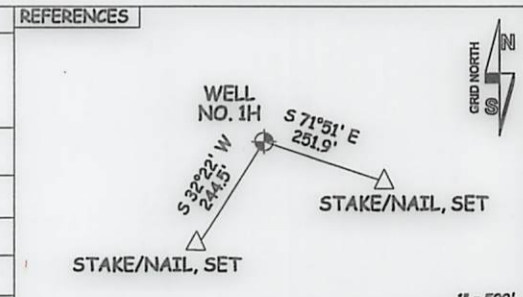
STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WILLOW LAND SURVEYING PLLC
220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415



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.

JOB # 15-012WA
DRAWING # DEULLEY1HMOD
SCALE 1" = 2000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS
STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

LEGEND
--- Surface Owner Boundary Lines +/-
--- Interior Surface Tracts +/-
X Existing Fence
⊕ Found monument, as noted
DOUGLAS R. ROWE P.S. 2202
DATE 12/13/17
OPERATOR'S WELL# DEULLEY UNIT #1H



WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL 47 095 02359
(IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X STATE COUNTY PERMIT
LOCATION: ELEVATION 1,044' WATERSHED HEADWATERS MIDDLE ISLAND CREEK
QUADRANGLE SHIRLEY 7.5' DISTRICT CENTERVILLE COUNTY TYLER
SURFACE OWNER EDNA MONROE ACREAGE 110.32 ACRES +/-
OIL & GAS ROYALTY OWNER CARL BAKER; FORREST E. LEASEBURG ET UX; CAR W. NOLAN; RONALD ASH ET UX; SANCHO OIL & GAS CORP.; LEASE ACREAGE 87 AC.; 78 AC.; 120 AC.; 72 AC.; 100 AC.;
RUTH MEREDITH; CARL W. ASH ET UX; CARL W. ASH; RICHARD E. DEULLEY ET UX; HARRY ASH & JESSIE D. ASH ET AL; ROBERT TENNANT 210 AC.; 24 AC.; 24.63 AC.; 113 AC.; 291 AC.; 12.76 AC.
PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL
(SPECIFY) MOD POE PLUG & ABANDON CLEAN OUT & REPLUG
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,577' TVD 18,005' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
ADDRESS 1615 WYNKOOP ST. ADDRESS 5400 D BIG TYLER ROAD
DENVER, CO 80202 CHARLESTON, WV 25313

LATITUDE 39°27'30"

11,304'

6,855' TO BOTTOM HOLE

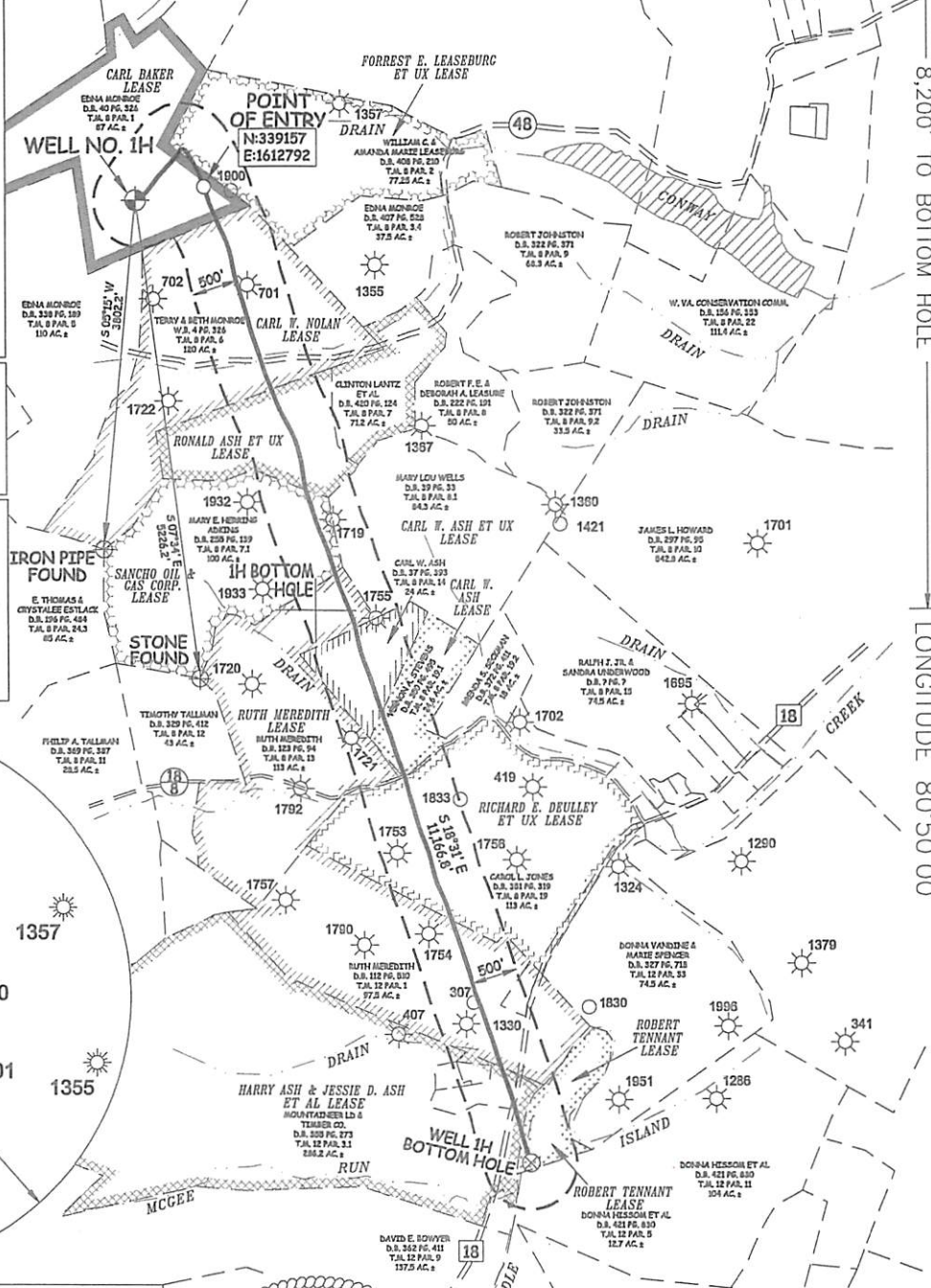
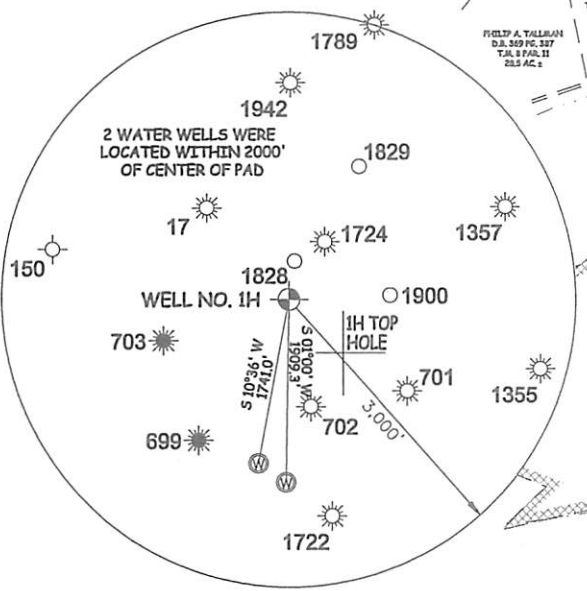
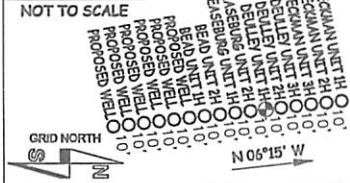
LATITUDE 39°25'00"

Antero Resources Corporation
Well No. Deulley Unit 1H
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NOTES:
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8,200' TO BOTTOM HOLE

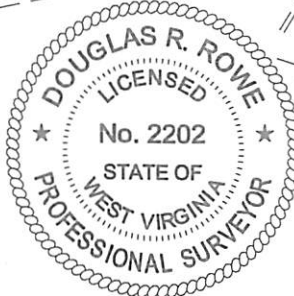
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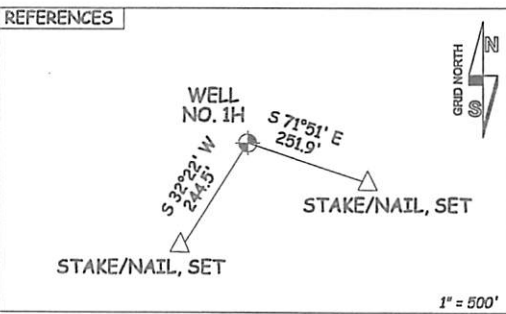
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FORM WW-6 DENVER, CO 80202 ADDRESS 5400 D BIG TYLER ROAD CHARLESTON, WV 25313

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6A, Section 5(a)(5)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<u>Carl Baker Lease</u>			
Carl Baker, et al	Sancho Oil and Gas Corporation	1/8	0333/0908
Sancho Oil and Gas Corporation	Antero Resources Corporation	Assignment	0436/0177
<u>Forrest E. Leaseburg et ux Lease</u>			
Forrest E Leaseburg et ux	Sancho Oil and Gas Corporation	1/8	0276/0341
Sancho Oil and Gas Corporation	The Coastal Corporation	Assignment	0282/0636
The Coastal Corporation	Pardee Exploration Company	Assignment	0283/0355
Pardee Exploration Company	Pardee Resources Group, Inc	Name Change	0008/0580
Pardee Resources Group, Inc	Pardee Minerals, LLC	Merger	Exhibit 3
Pardee Minerals, LLC	Antero Resources Appalachian Corporation	Assignment	0416/0469
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<u>Carl W. Nolan Lease</u>			
Carl W. Nolan, single	Warren R. Haught	1/8	0214/0578
Warren R. Haught, as an individual	Sancho Oil and Gas Corporation	Assignment	0376/0182
Sancho Oil and Gas Corporation	Antero Resources Corporation	Assignment	0436/0177
<u>Ronald Ash, et ux Lease</u>			
Ronald Ash, et ux	Sancho Oil and Gas Corporation	1/8	0278/0188
Sancho Oil and Gas Corporation	The Coastal Corporation	Assignment	0283/0134
The Coastal Corporation	Pardee Gas Company	Merger	Exhibit 2
Pardee Gas Company	Pardee Exploration Company	Assignment	0287/0430
Pardee Exploration Company	Pardee Resources Group, Inc.	Name Change	COI 0008/0580
Pardee Resources Group, Inc.	Pardee Minerals, LLC	Merger	Exhibit 3
Pardee Minerals, LLC	Antero Resources Appalachian Corporation	Assignment	0419/0526
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<u>Sancho Oil & Gas Corp. Lease</u>			
Frank Grass, et al	Sancho Oil and Gas Corporation	1/8	0335/0601
Sancho Oil and Gas Corporation	Antero Resources Corporation	Assignment	0436/0177
<u>Ruth Meredith Lease</u>			
Ruth Meredith	Sancho Oil and Gas Corporation	1/8	0281/0611
Sancho Oil and Gas Corporation	Antero Resources Corporation	Assignment	0436/0177
<u>Carl W. Ash, et ux Lease</u>			
Carl W. Ash, et ux	Antero Resources Corporation	1/8+	0449/0057
<u>Carl W. Ash Lease</u>			
Carl W. Ash, et ux	Antero Resources Corporation	1/8+	0455/0109

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Office of Oil and Gas
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WV Department of
Environmental Protection

*Partial Assignments to Antero Resources Corporation include 100% rights to extract, produce and market the oil and gas from the Marcellus and any other formations completed with this well.

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
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- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<u>Richard E. Deulley, et ux Lease</u>			
Richard Deulley, et al	Sancho Oil and Gas Corporation	1/8	0342/0679
Sancho Oil and Gas Corporation	Antero Resources Corporation	Assignment	0436/0177
<u>Harry Ash & Jessie D. Ash, et al Lease</u>			
Harry Ash & Jessie D. Ash, et al	J.A. Underwood	1/8	0171/0365
J.A. Underwood	Quaker State Oil Refining Corporation	Assignment	0171/0528
Quaker State Oil Refining Corporation	Petro Mark, Inc., a Corporation	Assignment	0246/0324
Petro Mark, Inc., a Corporation	Sancho Oil and Gas Corporation	Assignment	0268/0194
Sancho Oil and Gas Corporation	Antero Resources Corporation	Assignment	0436/0177

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Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<u>Robert Tennant Lease</u>				
	Robert H. Tennant, et al	Anvil Oil Company	1/8	0267/0056
	Anvil Oil Company	Dominion Appalachian Development, Inc.	Assignment	0323/0383
	Dominion Appalachian Development, Inc.	Dominion Appalachian Development, LLC	Name Change	Exhibit 4
	Dominion Appalachian Development, LLC	CONSOL Gas Appalachian Development, LLC	Certificate of Amendment COI 0009/0131	
	CONSOL Gas Appalachian Development, LLC	CNX Gas Company, LLC	Affidavit of Name Changes 0384/0191 and Mergers	
	CNX Gas Company, LLC	Antero Resources Corporation	Notice of Agreement	0489/0812

*Partial Assignments to Antero Resources Corporation include 100% rights to extract, produce and market the oil and gas from the Marcellus and any other formations completed with this well.

**Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator: Antero Resources Corporation
By: Kevin Kilstrom
Its: Senior VP of Production

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FORM WW-6A1
EXHIBIT 1

FILED

JUN 10 2013

Natalie E. Tennant
Secretary of State
1900 Kanawha Blvd E
Bldg 1, Suite 157-K
Charleston, WV 25305



Penney Barker, Manager
Corporations Division
Tel: (304)558-8000
Fax: (304)558-8381
Website: www.wvsgos.com
E-mail: business@wvsgos.com

APPLICATION FOR
AMENDED CERTIFICATE
OF AUTHORITY

Office Hours: Monday - Friday
8:30 a.m. - 5:00 p.m. ET

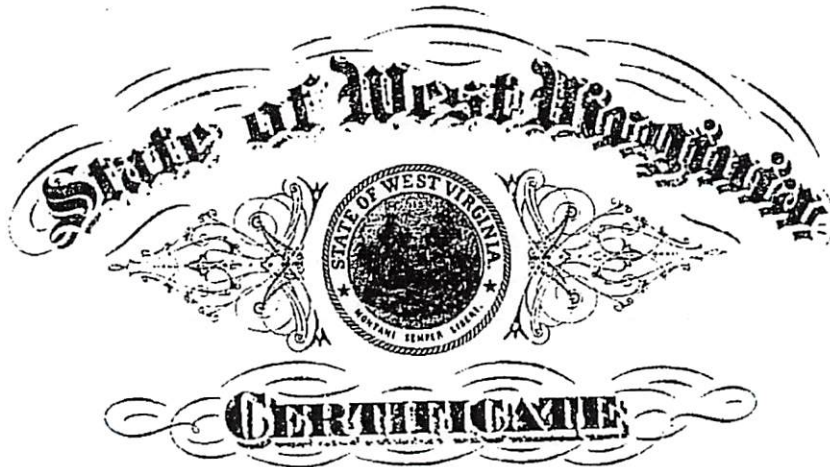
FILE ONE ORIGINAL
(Two if you want a filed
stamped copy returned to you)
FEE: \$25.00

**** In accordance with the provisions of the West Virginia Code, the undersigned corporation hereby ****
applies for an Amended Certificate of Authority and submits the following statement:

- Name under which the corporation was authorized to transact business in WV: Antero Resources Appalachian Corporation
- Date Certificate of Authority was issued in West Virginia: 6/25/2008
- Corporate name has been changed to: Antero Resources Corporation
(Attach one Certified Copy of Name Change as filed in home State of incorporation.)
- Name the corporation elects to use in WV: Antero Resources Corporation
(due to home state name not being available)
- Other amendments:
(attach additional pages if necessary)
- Name and phone number of contact person. (This is optional; however, if there is a problem with the filing, listing a contact person and phone number may avoid having to return or reject the document.)
Alvyn A. Schopp (303) 367-7310
Contact Name Phone Number
- Signature information (See below *Important Legal Notice Regarding Signature*):
Print Name of Signer: Alvyn A. Schopp Title/Capacity: Authorized Person
Signature: [Handwritten Signature] Date: June 10, 2013

***Important Legal Notice Regarding Signature:** Per West Virginia Code §31D-1-129, Penalty for signing false document. Any person who signs a document he or she knows is false in any material respect and knows that the document is to be delivered to the secretary of state for filing is guilty of a misdemeanor and, upon conviction thereof, shall be fined not more than one thousand dollars or confined in the county or regional jail not more than one year, or both.

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*I, Ken Hechler, Secretary of State of the
State of West Virginia, hereby certify that*

THE FOLLOWING IS A TRUE AND CORRECT COPY OF THE
ARTICLES OF MERGER OF:

THE COASTAL CORPORATION, A WV CORPORATION,
AND PARDEE GAS COMPANY, A WV CORPORATION, DULY
SIGNED AND VERIFIED PURSUANT TO THE PROVISIONS
OF SECTION 31-1-34 OF THE WV STATE CODE.

ACCORDINGLY, I HEREBY ISSUE THIS CERTIFICATE OF
MERGER, MERGING THE COASTAL CORPORATION WITH AND INTO PARDEE
GAS COMPANY, THE SURVIVOR, AND ATTACHED A DUPLICATE
ORIGINAL AS FILED IN MY SAID OFFICE.

*Given under my hand and the
Great Seal of the State of
West Virginia, on this*

TWENTY-EIGHTH day of
FEBRUARY 1990



Ken Hechler

Secretary of State
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State of West Virginia



Certificate

*I, Joe Manchin III, Secretary of State of the
State of West Virginia, hereby certify that*

by the provisions of the West Virginia Code, Articles of Merger were received and filed,
MERGING PARDEE RESOURCES GROUP, INC., A QUALIFIED PA ORGANIZATION, WITH AND INTO PARDEE MINERALS
LLC, A QUALIFIED DE ORGANIZATION.

Therefore, I hereby issue this

CERTIFICATE OF MERGER



*Given under my hand and the
Great Seal of the State of
West Virginia on this day of
March 2, 2004*

Secretary of State

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AC
State of West Virginia



Certificate

*I, Betty Ireland, Secretary of State of the
State of West Virginia, hereby certify that*

DOMINION APPALACHIAN DEVELOPMENT, INC.
(a Virginia corporation)

*filed an application for Conversion in my office as required by the provisions of the West
Virginia Code and was found to conform to law.*

Therefore, I issue this

CERTIFICATE OF CONVERSION

converting the corporation to

DOMINION APPALACHIAN DEVELOPMENT, LLC
(a Virginia Limited Liability Company)



*Given under my hand and the
Great Seal of the State of
West Virginia on*

February 23, 2006

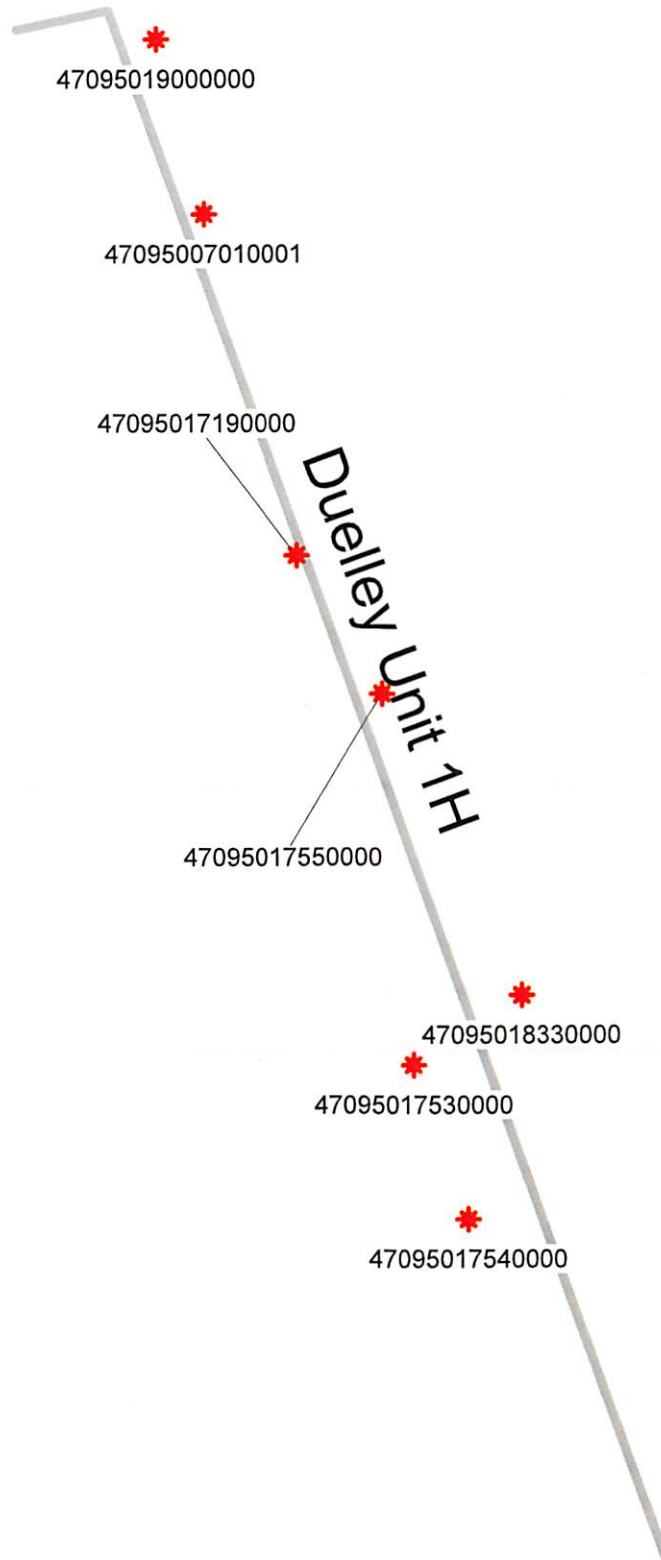
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Betty Ireland

Secretary of State



Antero Resources Corporation

Deulley Unit 1H - AOR



WELL SYMBOLS
Gas Well

May 10, 2018

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Permit Modification API# 47-095-02359

UWI (API Num)	Well Name	Well Number	Operator	Hist Oper	TD	Perforated Interval (shallowest, deepest)	Perforated Formation(s)	Producing Formation(s) not perf'd
47095019000000	NOLAN BAKER	6	DIVERSIFIED RESRCS I	SANCHO OIL & GAS	5,196	4598-5008	Riley, Benson	Big Injun, Speechley, Balltown, Bradford
47095007010001	NOLAN	3	SANCHO OIL & GAS	SANCHO OIL & GAS	5,156	2990-4950	Fifth, Benson	Big Injun, Speechley, Balltown, Bradford
47095017190000	ADKINS	2	DIVERSIFIED RESRCS I	SANCHO OIL & GAS	5,190	5067-5070	Benson	Big Injun, Speechley, Balltown, Bradford
47095017550000	MEREDITH RUTH	10	DIVERSIFIED RESRCS I	SANCHO OIL & GAS	5,200	5020-5024	Benson	Big Injun, Speechley, Balltown, Bradford, Riley
47095018330000	SPENCER DENNIS L JR	5	DIVERSIFIED RESRCS I	SANCHO OIL & GAS	5,132	4552-4931	Riley, Benson	Big Injun, Speechley, Balltown, Bradford
47095017530000	DEULLEY RICHARD E	4	DIVERSIFIED RESRCS I	SANCHO OIL & GAS	5,150	4979-4985	Riley, Alexander	Big Injun, Speechley, Balltown, Bradford
47095017540000	MEREDITH RUTH	5	DIVERSIFIED RESRCS I	SANCHO OIL & GAS	5,180	4600-5012	Riley, Benson	Big Injun, Speechley, Balltown, Bradford

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