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

June 24, 2016

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-6101002, issued to NNE RESOURCES LLC, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalities being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.

James Martin
Chief

Operator's Well No: J. WILDMAN 29
Farm Name: EDDY, MARK & HARRY
API Well Number: 47-6101002
Permit Type: Plugging
Date Issued: 06/24/2016

6101002P

PERMIT CONDITIONS

West Virginia Code §22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
3. Well work activities shall not constitute a hazard to the safety of persons.
4. This well is under a consent order and must be plugged under the terms of that agreement.

6101002P

WW-4B
Rev. 2/01

1) Date June 08, 2016
2) Operator's
Well No. J. Wildman 29
3) API Well No. 47- 061 - 01002

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil ____ / Gas X / Liquid injection ____ / Waste disposal ____ /
(If "Gas, Production X or Underground storage ____) Deep ____ / Shallow X

5) Location: Elevation 1,495 feet Watershed Dunkard Creek
District Clay County Monongalia Quadrangle Osage 7.5'

6) Well Operator NNE Resources LLC
Address 707 Virginia Street East, Suite 1200
Charleston, WV 25301

7) Designated Agent Zack Arnold
Address 48 Donley Street, Suite 601
Morgantown, WV 26501

8) Oil and Gas Inspector to be notified
Name Gayne Knitowski
Address P.O. Box 108
Gormania, WV 26720

9) Plugging Contractor
Name TBD
Address ____

10) Work Order: The work order for the manner of plugging this well is as follows:

Ensure all necessary erosion and sediment control devices are in place.

Perform necessary earth work to establish access and work area for rig and equipment.

RIH with open ended tubing to determine PBTD.

Attempt to remove all casing by pulling a minimum of 150% of casing string weight.

If casing will not pull out, cut and remove as much casing as possible.

Log well to determine casing and coal depth. Spot expandable cement from PBTD to 100' below coal to set a solid cement plug.

Set a solid cement plug TO 100' above coal. WOC expandable cement to harden. Top off well to surface with Class A cement with no more than 3% CaCl2 and no other additives.

Place a well monument with API number on spot of well. Reclaim site. After 70% growth is observed remove any remaining erosion and sediment controls.

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

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Work order approved by inspector Gayne Knitowski Date 6/9/2016

northeast
NATURAL ENERGY

J. Wildman 29
Clay District, Monongalia County, WV
API Number: 47-061-01002
AFE Number: TBD
Plugging Procedure

May 10, 2016

Discussion

Approval is requested to perform the initial plugging on the J. Wildman 29 well. The J. Wildman 29 is a vertical shallow well located in Clay District, Monongalia County, WV. This well was drilled to a depth of approximately 2,000'. Production from this well has been very low for numerous years. The J. Wildman 29 is recommended to be plugged and abandoned.

Plug and Abandonment Procedure:

1. Ensure all necessary erosion and sediment control devices are in place.
2. Perform necessary earth work to establish access and work area for rig and equipment.
3. RIH with open ended tubing to determine PBTD.
4. Attempt to remove all casing by pulling a minimum of 150% of casing string weight.
5. If casing will not pull out, cut and remove as much casing as possible.
6. Log well to determine casing and coal depth.
7. Spot expandable cement from PBTD to 100' below coal to set solid cement plug.
8. Set a solid cement plug TP 100' above coal.
9. WOC expandable cement to harden.
10. Top off well to surface with Class A cement with no more than 3% CaCl2 and no other additives.
11. Place well monument with API number on spot of well.
12. Reclaim site.
13. After 70% growth is observed remove any remaining erosion and sediment controls.

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SCOPE OF OPERATION

1. Safety is the highest priority. Control costs and avoid unnecessary expenditures.
2. Attempt to cut or pull all recoverable casing.
3. TIH with 1½" tubing to estimated TD of 2,000'.
4. Pump cement and gel plugs per state requirements.
5. Bury and plat a well monument with WV State API number.

PROCEDURE

1) Safety is the number one priority. Well site safety meetings will be held before each major operation
2) MIRU construction equipment and remove any tanks, separators, well lines, meter runs, exc.
3) MIRU service rig & needed BOP equipment
4) TOOH strapping rods and tubing
5) TIH strapping 1½" tubing to PBTD'
6) Pump 20 sks of Class A cement (150' cement plug), displace cement plug
7) TOOH with 1½" tubing
8) RIH with Mechanical Ripper on sand line to 1,600' and attempt to rip and retrieve 5 3/16" casing.
9) If Mechanical Ripper is not successful, contact NNE representative to discuss wire line options
10) TOOH with 5 3/16" casing and tally out
11) RIH and perforate 8¼" casing
12) RIH with Mechanical Ripper on sand line to rip 8¼" casing above free point and perforations
13) TIH with 1½" tubing
14) Pump cement from 1,650' to above 8¼" perfs
15) TOOH with 1½" tubing

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16) TOOH with 8¼" casing

17) RIH with 1½" tubing

18) Cement to surface

19) Cut all casing 36 inches below GL. Install a monument to WV state requirements

20) RDMO all service equipment providers and reclaim location to WV State requirements

Well Record Procedure

NNE Resources LLC researched the proposed well for plug and abandonment using the following information centers:

- The DEP office at 601-57th Street, Charleston, WV 25304
- The DEP online database for Oil and Gas Wells for production and well data
- Titlemaps.com for lease information.
- Research well files provided by previous operator.

Well Data

Very little documentation exists on Wildman 29. Based on offset experience it is estimated that 5-3/16" production casing was run to a TD of approximately 2,000'. Surface casing is most likely 8-1/4" run to approximately 850'

Capacities

SIZE	WEIGHT	CAPACITY (GAL/FT)	CAPACITY (BBL/FT)	CAPACITY (CU FT/FT)
10*	N/A	4.192	0.0998	0.5603
8 1/4*	N/A	2.738	0.0652	0.3659
6 5/8*	N/A	1.536	0.0365	0.2052
5 3/16*	N/A	1.038	0.0247	0.1387
2 3/8*	4.7#	0.16239	0.00387	0.02171

*The asterisks represent sizes where estimates were used to produce the capacity data. For the 10" casing the capacity of a 35.75#/Ft. 10 ¾" casing was used. For the 8 ¼" casing capacities a 20#/Ft. 8 5/8" casing was used. For the 5 3/16" casing capacities a 13#/Ft. 5 ½" casing was used.

G1010024

Driving Directions

From the Sheetz at the intersection of US Route 19 and State Route 19/24 in Star City travel north on US Route 19 for 1.63 miles. Turn left onto State Route 7 and travel 5.18 miles. Turn left onto State Route 37 (Pedlar Run) and travel 3.13 miles to State Route 37. Turn left onto State Route 37 and travel 0.32 miles to existing stone well road on the left. Travel on existing well road out ridge approximately 3700 feet to location.

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FORM IV-6

6101002P

11,630'

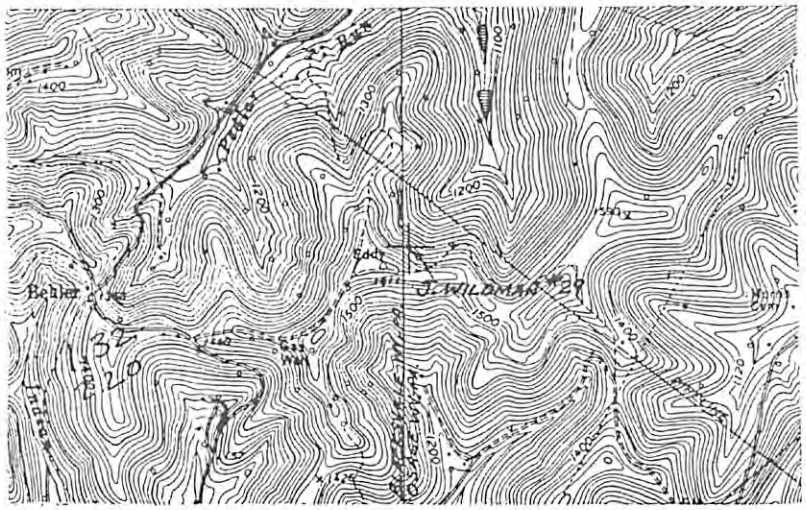
INSTRUCTIONS

1)Attach a photo copy of the location of the well on a 7.5 minute Quadrangle with the corresponding Longitude and Latitude.
2)Designate the location of the well with the symbol(+).

LATITUDE 39° 40' 00"

LONGITUDE 80° 05' 00"

7,040'



6101002P

WW-4A
Revised 6-07

1) Date: 06/08/2016
2) Operator's Well Number
J. Wildman 29

3) API Well No.: 47 - 061 - 01002

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE 0F APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served:
(a) Name: Howard S. Eddy
Address: 1481 Pedlar Run Road
Core, WV 26541
(b) Name: Cheryl G. Dean
Address: P.O. Box 325
Pentress, WV 26544
(c) Name: Branson Raith Matheny
Address: 1304 Pedlar Run Road
Core, WV 26541
6) Inspector: Gayne Knitowski
Address: P.O. Box 108
Gormania, WV 26720
Telephone: 304-546-8171

5) (a) Coal Operator
Name
Address

(b) Coal Owner(s) with Declaration
Name: Murray Energy Corporation
Address: 46226 National Road
St. Clairsville, OH 43950
Name: Consol Mining Company LLC
Address: CNX Center, 1000 Consol Energy Drive
Canonsburg, PA 15317

(c) Coal Lessee with Declaration
Name
Address

TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

(1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
(2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.

OFFICIAL SEAL
STATE OF WEST VIRGINIA
NOTARY PUBLIC
Michael Eisenhauer
156 Meadowridge Townhomes
Morgantown, WV 26505
My Commission Expires Sep. 25, 2020

Well Operator: NNE Resources LLC
By: Zack Arnold
Its: General Manager-Operations
Address: 707 Virginia Street East, Suite 1200
Charleston, WV 25301
Telephone: 304-241-5752

Subscribed and sworn before me this 8 day of June, 2016
Notary Public
My Commission Expires Sep. 25, 2020

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JUN 10 2016
WV Department of
Environmental Protection

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at deprivacyoffier@wv.gov.

OFFICIAL SEAL
STATE OF WEST VIRGINIA
NOTARY PUBLIC
Michael Eisenhauer
156 Meadowridge Townhomes
Morgantown, WV 26505
My Commission Expires Sep. 25, 2020

6101002P

WW-9
(2/15)

API Number 47 - 061 - 01002
Operator's Well No. J. Wildman 29

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name NNE Resources LLC OP Code 494511469

Watershed (HUC 10) Dunkard Creek Quadrangle Osage 7.5'

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes ☐ No ☑

Will a pit be used? Yes ☐ No ☑

If so, please describe anticipated pit waste: _____

Will a synthetic liner be used in the pit? Yes ☐ No ☑ If so, what ml.? N/A

Proposed Disposal Method For Treated Pit Wastes:

_____ Land Application
■ Underground Injection (UIC Permit Number See attachment)
■ Reuse (at API Number See attachment)
■ Off Site Disposal (Supply form WW-9 for disposal location)
_____ Other (Explain _____

Will closed loop system be used? If so, describe: N/A

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Freshwater/gel

-If oil based, what type? Synthetic, petroleum, etc. N/A

Additives to be used in drilling medium? Bentonite

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Remove offsite

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) _____

-Landfill or offsite name/permit number? N/A

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature _____

Company Official (Typed Name) Zack Arnold

Company Official Title General Manager-Operations

OFFICIAL SEAL
STATE OF WEST VIRGINIA
NOTARY PUBLIC
Michael Eisenhauer
156 Meadowridge Townhomes
Morgantown, WV 26505
My Commission Expires Sep. 25, 2020

Subscribed and sworn before me this 8 day of June, 2016

_____ Notary Public

My commission expires Sep. 25, 2020

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Form WW-9

Operator's Well No. J. Wildman 29

NNE Resources LLC

Proposed Revegetation Treatment: Acres Disturbed 0.80+- Prevegetation pH TBD

Lime 2 Tons/acre or to correct to pH 7

Fertilizer type 19-19-19

Fertilizer amount 200 lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Orchard Grass	46	Orchard Grass	46
Red Clover	8	Red Clover	8
Tertraploid Perennial Rye	16	Tertraploid Perennial Rye	16
Timothy 15 Annual Rye	15	Timothy 15 Annual Rye	15

Attach:
Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Gary D Kuhn

Comments: Reclaim ASAP

Title: Inspector Date: 6/9/2016

Field Reviewed? (X) Yes ( ) No

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Attachment A to WW-9

Northeast Natural Energy LLC ("NNE") plans to utilize a closed loop process for the plugging of the J. Wildman 29 well. Return flow from the well will be separated into its liquid and solid form. Liquids will be held in steel tanks and reused in the drilling and completion process or disposed of at an approved facility listed below. Solids removed from the stream will be diverted to steel half-round tanks where they will be solidified on site and taken to disposal as they are accumulated.

J. Wildman 29 Drill Cuttings will be taken to disposal at one or more of the following disposal/approved waste facilities, unless listed facilities are no longer approved to accept waste at time of disposal:

- Westmoreland Landfill (Tervita) – Belle Vernon, PA (Permit # 100277)
- Meadowfill Landfill (Waste Management) – Bridgeport, WV (Permit # SWF 103298)
- Max Environmental – Yukon, PA (PAD004835146 and 301071)
- Max Environmental – Bulger, PA (PAD059087072 and 301359)
- Chestnut Valley Landfill (Advanced Disposal) – Export, PA (Permit # 101421)

NNE plans to reuse and recycle all fluid and/or reach out to other operators in the area who may be able to reuse and recycle such fluid. However, in the event that reuse is not obtainable the fluid will be disposed of at one, or multiple, of the following disposal/approved waste facilities unless listed facilities are no longer approved to accept waste at time of disposal:

- Fairmont Brine Processing (WV NPDES #0116408)
- Green Hunter M. E. Elder 1 Disposal Well (Permit # 47-085-05151)
- Green Hunter Mason 1 Disposal Well (Permit #47-085-09721)
- Green Hunter Warren Disposal Well (Permit #34-121-2-3995)
- Green Hunter Travis Unit Disposal Well (Permit #34-121-2-4086)
- Viking Energy Corporation 20320 Disposal Well (Permit#47-039-02210)
- Ohio Oil Gathering Killbuck Disposal Well (Permit #34-075-24527)
- Ohio Oil Gathering Moran Disposal Well (Permit #34-089-24792)
- Ohio Oil Gathering Bells Run Disposal Well (Permit #34-167-29395)
- Ohio Oil Gathering Long Run Disposal Well (Permit #34-167-29658)
- Ohio Oil Gathering Newell Run Disposal Well (Permit #34-167-29685)
- Appalachian Oil Purchaser Greens Run Disposal Well (Permit #2D0732540)
- Appalachian Oil Purchaser BW#4 Disposal Well (Permit # 2D0732523)

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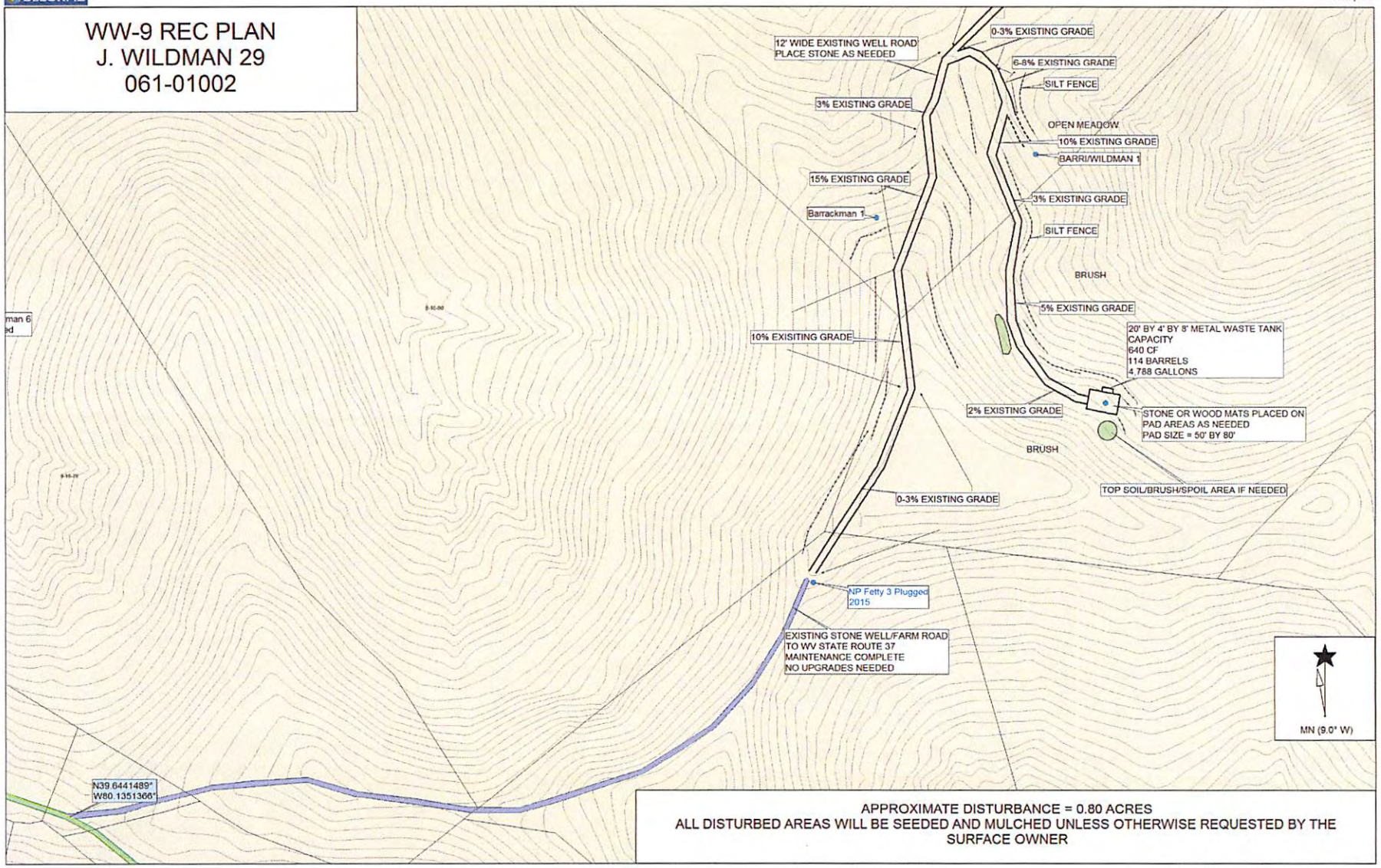
XMap® 7

WW-9 REC PLAN
J. WILDMAN 29
061-01002



APPROXIMATE DISTURBANCE = 0.80 ACRES
ALL DISTURBED AREAS WILL BE SEEDED AND MULCHED UNLESS OTHERWISE REQUESTED BY THE SURFACE OWNER

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Data Zoom 17-1

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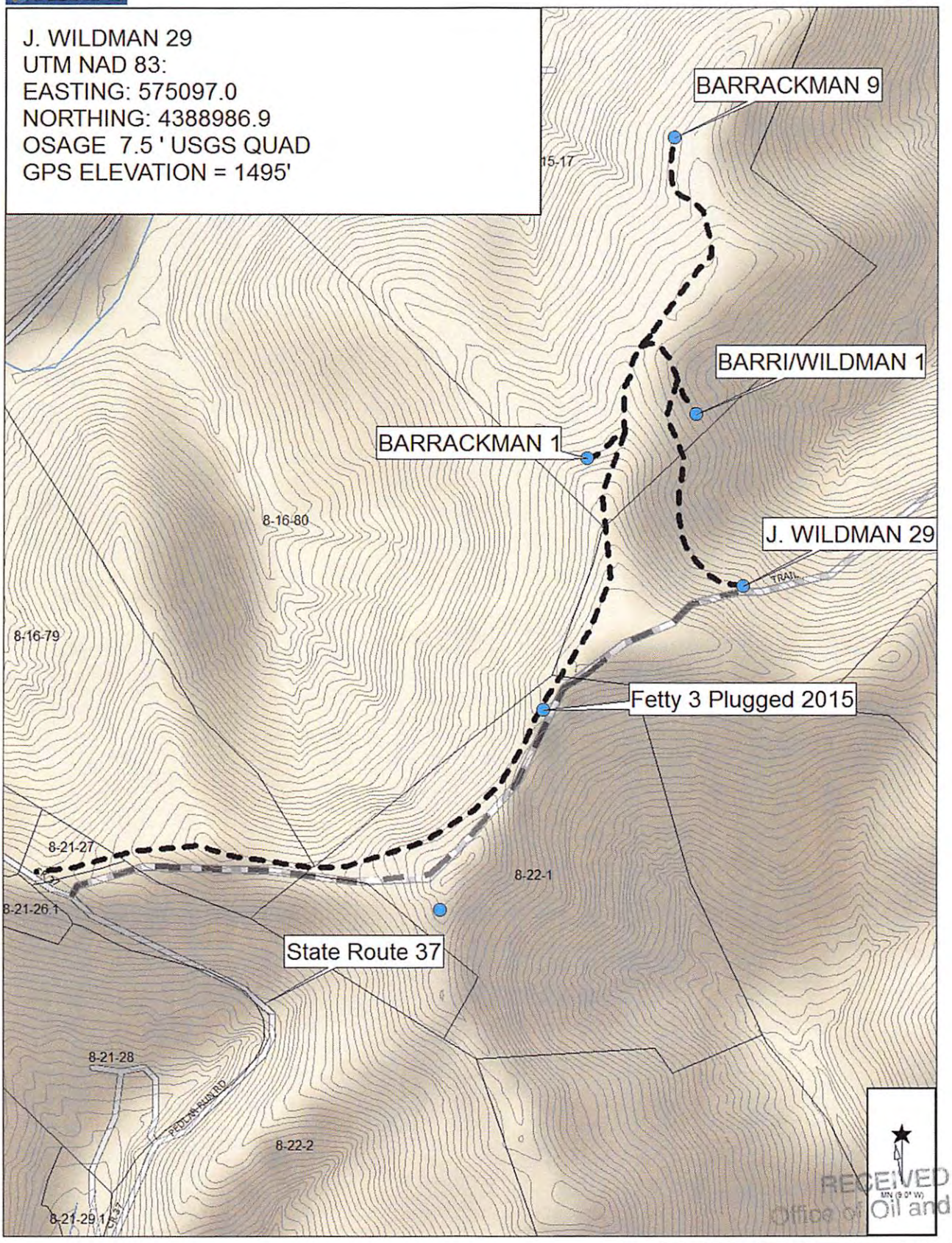
XMap® 7

J. WILDMAN 29
UTM NAD 83:
EASTING: 575097.0
NORTHING: 4388986.9
OSAGE 7.5 ' USGS QUAD
GPS ELEVATION = 1495'



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WW-7
8-30-06

West Virginia Department of Environmental Protection
Office of Oil and Gas
WELL LOCATION FORM: GPS

API: 47-061-01002 **WELL NO.:** 29

FARM NAME: J. Wildman

RESPONSIBLE PARTY NAME: NNE Resources LLC

COUNTY: Monongalia **DISTRICT:** Clay

QUADRANGLE: Osage 7.5'

SURFACE OWNER: Howard S. Eddy, Cheryl Gay Dean, Branson R. Matheny

ROYALTY OWNER: Trio Petroleum Corporation and Waco Oil and Gas Company, Inc., et al

UTM GPS NORTHING: 4388986.9

UTM GPS EASTING: 575097.0 **GPS ELEVATION:** 1495'

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS ____: Post Processed Differential _____

Real-Time Differential _____

Mapping Grade GPS X: Post Processed Differential _____

Real-Time Differential X

4. **Letter size copy of the topography map showing the well location.**

I the undersigned, hereby certify this data is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Office of Oil and Gas.

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Signature	General Manager - Operations	6/8/2016
	Title	Date

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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways
1900 Kanawha Boulevard East • Building Five • Room 110
Charleston, West Virginia 25305-0430 • (304) 558-3505

Earl Ray Tomblin
Governor

Paul A. Mattox, Jr., P. E.
Secretary of Transportation/
Commissioner of Highways

August 21, 2015

James A. Martin, Chief
Office of Oil and Gas
Department of Environmental Protection
601 57th Street, SE
Charleston, WV 25304

Subject: DOH Permit for the NP Fetty No. 3 Well Site, Monongalia County

Dear Mr. Martin,

Northeast Natural Energy LLC has been issued permit #04-2015-0835 to access the State Road for a well site located off of Monongalia County Route 37 SLS.

The operator has signed a DISTRICT WIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated January 3, 2012.

Very Truly Yours,

Gary K. Clayton

Gary K. Clayton, P.E.
Regional Maintenance Engineer
Central Office O&G Coordinator

Cc: Dave McDougal
Northeast Natural Energy Corporation
CH, OM, D-4
File

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