



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

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

Thursday, December 08, 2016
WELL WORK PERMIT
Vertical / Plugging

NNE RESOURCES LLC
707 VIRGINIA STREET EAST, SUITE 1200

CHARLESTON, WV 25301

Re: Permit approval for
47-061-00449-00-00

This well work permit 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 any additional specific 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.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless 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:
Farm Name: WALKER, J. S.
U.S. WELL NUMBER: 47-061-00449-00-00
Vertical / Plugging
Date Issued: 12/8/2016

Promoting a healthy environment.

12/09/2016

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.



northeast

NATURAL ENERGY

JS Walker 3
Clay District, Monongalia County, WV
API Number: 47-061-00449
AFE Number: TBD
Plugging Procedure

September 28, 2016

Discussion

Approval is requested to perform the initial plugging on the J.S. Walker 3 well. The well is a vertical shallow well located in Clay District, Monongalia County, WV. This well was drilled to a depth of 2,138'. Production from this well has been very low for numerous years. The J.S. Walker 3 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 ^{TO} 100' above coal. *EXPANDABLE CEMENT. gwm*
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.

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 2,138'.
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

- 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 J.S. Walker 3. Based on available data and offset experience it is estimated that 5-3/16" production casing was run to a TD of approximately 2,197'. Surface casing is most likely 8-1/4" run to approximately 819'

Capacities

10" 850'
 8¼" 8600'
 6⅝" 1855'
 5⅜" 2138'

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.

SOUTH PENN OIL COMPANY - COMPLETION

SERIAL NO. [REDACTED] FARM [REDACTED] WELL NO. [REDACTED]
 ELEVATION N. 13-14 S. 30 W. [REDACTED]
 LEASE NO. [REDACTED] ACRES, 90
 WATERS OF Jakes Run
 DISTRICT Clay COUNTY Monongalia STATE W. Va.
 DRILLING COMMENCED 3/27/1923 COMPLETED 5/27/1923 DEPTH 2262

SANDS	TOP	BOTTOM	ELEV. TOP	CASING USED
FCN. COAL OR SHO LIME	330			10" 850
Big Injun	2130			8 1/2" 860
1st pay	2225			6 1/8" 1855
				5 3/16" 2138

INITIAL PROD. no record SAND Big Injun DEPTH 2225
 GAS TEST no
 SHOT 5 QUANTS 40 to 40
 REMARKS (not drilled through Big Injun)

REPORTED BY [REDACTED] ABANDONED

RECEIVED

DEC 17 1920

OIL & GAS DIVISION
DEPT. OF MINES

12/09/2016

47-061-0449

ARTICIPANTS:

DATE:

BUYER:

WELL OPERATOR:

Pennzoil Company JAN 16 1981

FIRST PURCHASER:

Not Dedicated

OTHER:

W. Va. Department of Mines, Oil & Gas Division
WELL DETERMINATION FILE NUMBER

90-08-27-108-061-0449

Use Above File Number on all Communications
Relating to Determination of this Well

Qualifier - J. H. Huggins

CHECK EACH ITEM AS COMPLETE OR NOTE WHAT IS MISSING

ITEM NO.

- 1. PERC -121 Items not completed - Line No. _____
- 2. IV-1 Agent James A. Crews
- 3. IV-2 Well Permit _____
- 4. IV-6 Well Plat:
- 5. IV-35 Well Record: Drilling Deepening _____
- 6. IV-36 Gas-Oil Test: Gas Only _____ Was Oil Produced? _____ Ratio _____
- 7. IV-39 Annual Production _____ years
- 8. IV-40 90 day Production: 91 Days off line: _____
- 9. IV-48 Application for certification. Complete?
- 10-17. IV Form 51 - 52 - 53 - 54 - 55 - (56) - 57 - 58 Complete? Affidavit Signed
- 18-28. Other: Survey _____ Logs _____ Geological Charts _____
Structure Map _____ 1: 4000 Map _____ Well Tabulations _____
Gas Analyses _____
- (5) Date commenced: 3-27-1893 Date completed 3-29-1893 Deepened _____
- (5) Production Depth: 2130 - 2225
- (5) Production Formation: Big Injun
- (5) Final Open Flow: NA
- (5) After Frac. R. P.: NA
- (6) Other Gas Test: _____
- (7) Avg. Daily Gas from Annual Production: $\frac{2629}{365} = 7.2 \text{ MCF}$, oil $\frac{184}{365} = 0.5 \text{ BBL}$
- (8) Avg. Daily Gas (from 90-day ending w/1-120 days): $\frac{618}{91} = 6.8 \text{ MCF}$, oil $\frac{50}{91} = 0.5 \text{ BBL}$
- (8) Line Pressure: NA PSIG from Daily Report _____
- (5) Oil Production: NO From Completion Report _____
- 3-17. Does lease inventory indicate enhanced recovery being done? NO
- 3-17. Is affidavit signed? Notarized?
- Does official well record with the Department confirm the submitted information? NO
- Additional information _____ Does computer program confirm? _____
- Is Determination Objected to _____ By Whom? _____

12/09/2016

J.S.

Driving Directions

From Route 7 turn onto Pedlar run road for 3.2 miles then stay right on Pedlar run road look for gate on the right.

WW-4A
Revised 6-07

1) Date: 09/28/2016
2) Operator's Well Number
J.S. Walker 3

3) API Well No.: 47 - 061 - 00449

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

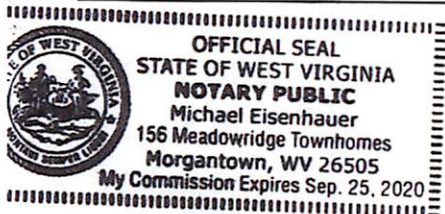
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name: David P. Walker and Nancy Facemire	Name: _____
Address: 431 Statler Run Road	Address: _____
Fairview, WV 26570	_____
(b) Name: Mary H. Walker	(b) Coal Owner(s) with Declaration
Address: 1611 South Pamona D-11	Name: Murray Energy Company LLC - Attn: Alex O'Neil
Fullerton, CA 92832	Address: 46226 National Road
_____	St. Clairsville, OH 43950
(c) Name: Joyce Bennet	Name: Consol Mining Company LLC - Attn: Analyst
Address: 1790 Jakes Run Road	Address: CNX Center, 1000 Consol Energy Drive
Fairview, WV 26570	Canonsburg, PA 15317
6) Inspector: Gayne Knitowski	(c) Coal Lessee with Declaration
Address: P.O. Box 2	Name: _____
Moundsville, WV 26041	Address: _____
Telephone: 304-546-8171	_____

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.



Well Operator: NNE Resources LLC
 By: Zack Arnold
 Its: General Manager-Operations
 Address: 707 Virginia Street East, Suite 1200
 Charleston, WV 25301
 Telephone: 304-212-0437

Subscribed and sworn before me this 14 day of October, 2016
Michael Eisenhauer / M... Notary Public
 My Commission Expires 9/25/2020

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 depprivacyofficer@wv.gov.

WW-9
(2/15)

API Number 47 - 061 - 00449
Operator's Well No. J.S. Walker 3

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 Blacksville 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) _____

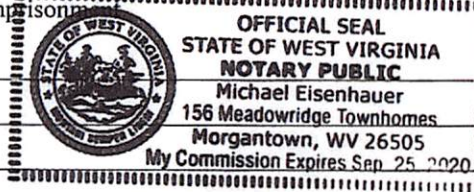
-Landfill or offsite name/permit number? see attachment

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 [Signature]
Company Official (Typed Name) Zack Arnold
Company Official Title General Manager-Operations



Subscribed and sworn before me this 14 day of October, 20 16

Michael Eisenhauer / [Signature] Notary Public

My commission expires 9/25/2020

NNE Resources LLC

Proposed Revegetation Treatment: Acres Disturbed 0.85 +/- 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	Timothy	15
Annual Rye	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: _____

Comments: _____

Title: _____ Date: _____

Field Reviewed? () Yes () No

Attachment A to WW-9

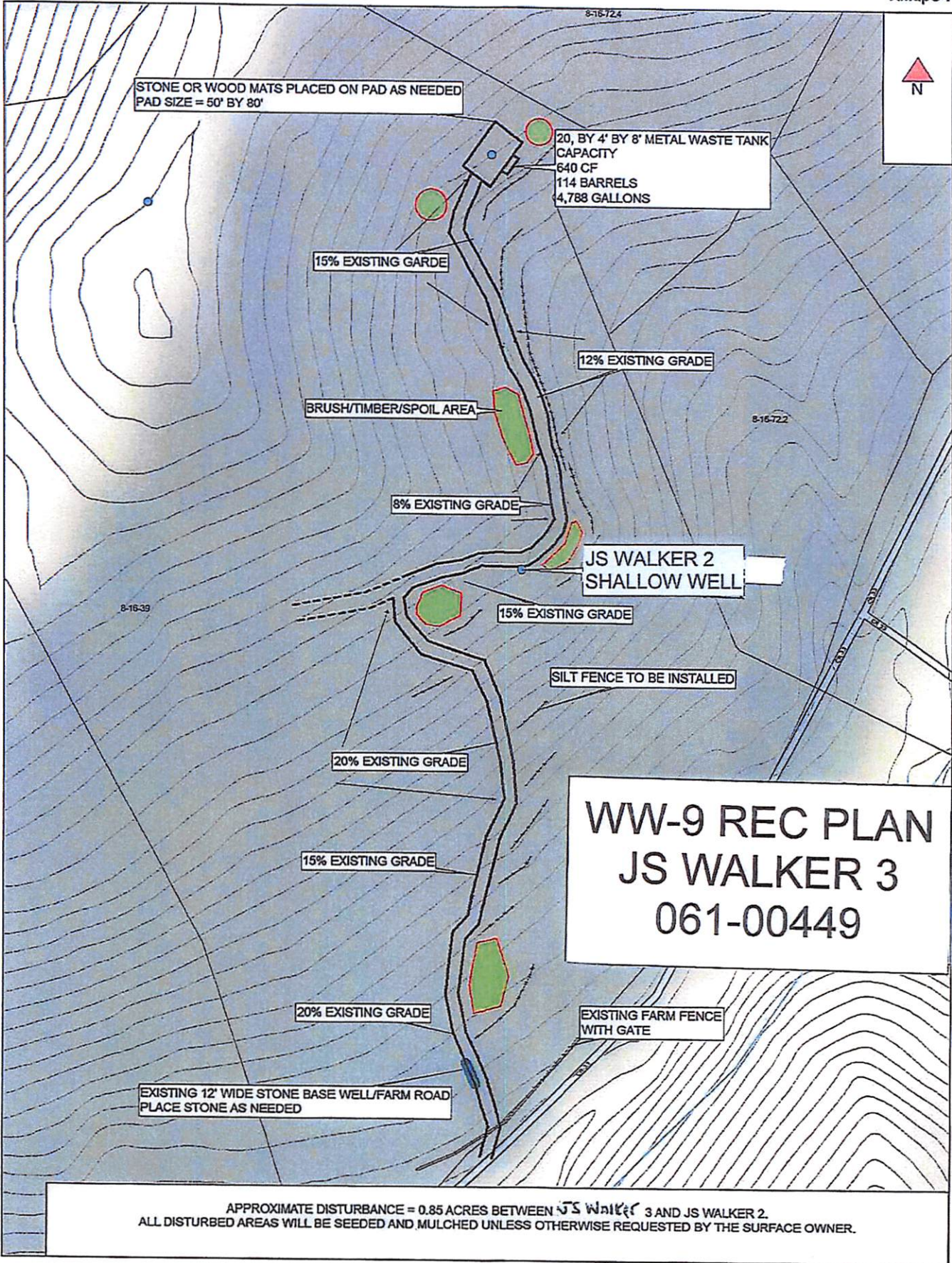
Northeast Natural Energy LLC ("NNE") plans to utilize a closed loop process for the plugging of the J.S. Walker 3 well. Return flow from the well will be separated into its liquid and solid form. Liquids will be held in steel tanks and reused in the drilling and completion process or disposed of at an 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.S. Walker 3 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:

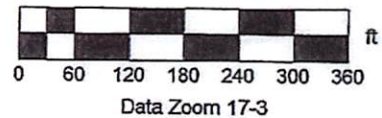
- Fairmont Brine Processing (WV NPDES #0116408)
- Green Hunter M. E. Elder 1 Disposal Well (Permit # 47-085-05151)
- Green Hunter Mason 1 Disposal Well (Permit #47-085-09721)
- Green Hunter Warren Disposal Well (Permit #34-121-2-3995)
- Green Hunter Travis Unit Disposal Well (Permit #34-121-2-4086)
- 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)



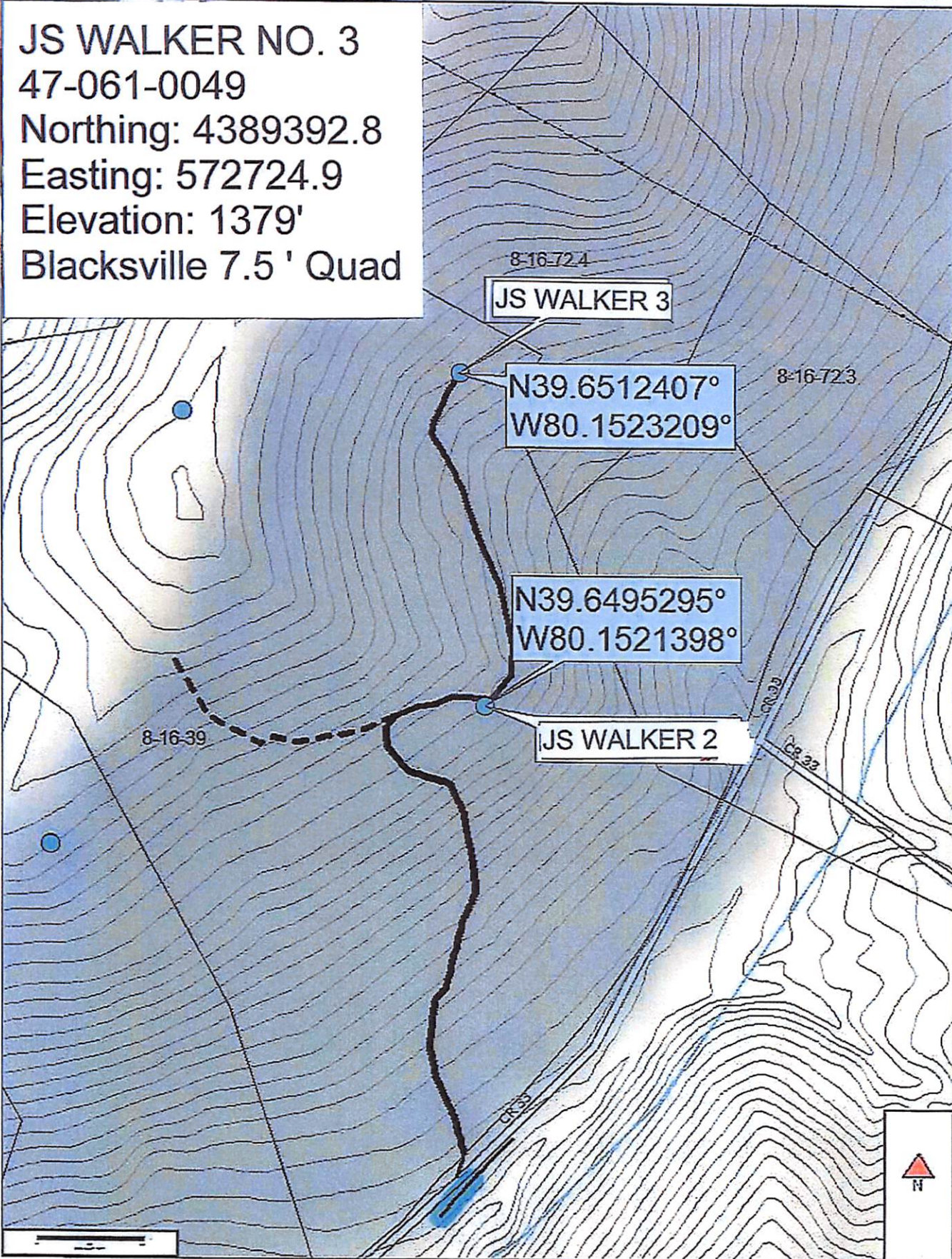
Data use subject to license.

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www.delorme.com



JS WALKER NO. 3
 47-061-0049
 Northing: 4389392.8
 Easting: 572724.9
 Elevation: 1379'
 Blacksville 7.5 ' Quad



Data use subject to license.

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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: 47-061-00449 WELL NO.: 3

FARM NAME: J.S. Walker

RESPONSIBLE PARTY NAME: NNE Resources LLC

COUNTY: Monongalia DISTRICT: Clay

QUADRANGLE: Blacksville'

SURFACE OWNER: David P. Walker, et al

ROYALTY OWNER: Linda Kay Tennant, et al

UTM GPS NORTHING: 4389392.8

UTM GPS EASTING: 572724.9 GPS ELEVATION: 1379'

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.

[Signature]
Signature

General Manager - Operations
Title

14 OCT 2016
Date