



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

Friday, August 30, 2019
WELL WORK PLUGGING PERMIT
Vertical Plugging

NNE RESOURCES LLC
707 VIRGINIA STREET EAST, SUITE 1200

CHARLESTON, WV 25301

Re: Permit approval for 3
47-061-00531-00-00

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.

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. Please be advised that form WR-38, Affidavit of Plugging and Filling Well, 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: 3
Farm Name: TENNANT, NANCY
U.S. WELL NUMBER: 47-061-00531-00-00
Vertical Plugging
Date Issued: 8/30/2019

I

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.

1) Date June 7, 2019
2) Operator's
Well No. Nancy Tennant 3
3) API Well No. 47-061 - 00531

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 or Underground storage) Deep / Shallow x

5) Location: Elevation 1,086 Watershed Dunkard Creek
District Clay County Monongalia Quadrangle Blacksville

6) Well Operator NNE Resources LLC 7) Designated Agent John Adams, Sr VP of Operations
Address 707 Virginia St E., Suite 1200 Address 707 Virginia St. E., Suite 1200
Charleston, WV 25301 Charleston, WV 25301

8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Gayne Knitowski Name CONSERV Inc.
Address P.O. Box 108 Address 929 Charleston Road
Gormanian, WV 26720 Spencer, WV 25276

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

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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 6/13/2019

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, etc.
- 3) MIRU service rig & needed BOP equipment
- 4) TOOH strapping rods and tubing
- 5) TIH strapping tubing to 2,000' **SPOT GEL**
- 6) Pump 20 sks of Class A cement (150' cement plug), displace cement plug **WOC, TAG PLUG, ADD CEMENT IF NEEDED.**
- 7) TOOH with tubing
- 8) RIH with mechanical ripper or casing cutter to 1,620' and attempt to rip and retrieve 5 3/16" casing.
- 9) TOOH with production casing and tally out **SET A MINIMUM 100' CLASS A CEMENT ACROSS CUT.**
- 10) Attempt to pull 1-1/2 times intermediate casing string weight to establish free point
- 11) If casing integrity is such that substantial pulling is unsafe, contact DEP prior to moving on to Step 12.
- 12) RIH and perforate intermediate casing below free point
- 13) RIH with mechanical ripper or casing cutter to rip intermediate casing above free point and perforations **SET A MINIMUM OF 100' CLASS A CEMENT PLUG ACROSS CUT.**
- 14) TIH with tubing
- 15) Pump cement from 1,650' to above intermediate perforations
- 16) TOOH with tubing
- 17) TOOH with intermediate casing
- 18) RIH with tubing
- 19) Cement to surface
- 20) Cut all casing 36 inches below GL. Install a monument to WV state requirements
- 21) RDMO all service equipment providers and reclaim location to WV State requirements

Reclaim SITE ASAP

- COVER COAL W/ MINIMUM 100' CLASS A PLUG.
- PLACE GEL BETWEEN ALL PLUGS.

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MSJK 6/13/2019



northeast

NATURAL ENERGY

Nancy Tennant 3
Monongalia County, WV
API Number: 706100531
AFE Number: TBD
Plugging Procedure

DISCUSSION

Approval is requested to perform the initial plugging on the Nancy Tennant 3 Well. The Nancy Tennant 3 is a vertical well located in Monongalia County, WV. The Nancy Tennant 3 was drilled to a depth of 2,000'. Production from this well has been very low for numerous years. The Nancy Tennant 3 is recommended to be plugged and abandoned.

WELL DATA

Location (Surface)	Lat. 39.6590687' Long.- 80.1625992'
TD	2,000'
PBTD	NA
Packer	NA
Marker Joint	NA

The actual TD of this well is unknown, so it has been estimated to be approximately 2,000' based off of the depth of the production casing.

CASING AND TUBULAR DATA

STRING	SIZE	WEIGHT/GRADE	DEPTH	THREAD	TOC
Surface	10"	N/A	610'	N/A	N/A
Intermediate	8 1/4"	N/A	825'	N/A	N/A
Production	5 3/16"	N/A	1,942'	N/A	N/A

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CAPACITIES

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

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

* 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 3/4" casing was used. For the 8 1/4" casing capacities a 20#/ft 8 5/8" casing was used. For the 5 3/16" casing capacities a 13#/ft 5 1/2" casing was used.

WELLHEAD EQUIPMENT

COMPONENT	SIZE & RATING
Manufacturer	N/A
Tubing Spool	N/A
Casing Spool	N/A
Bradenhead	N/A

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 1 1/2" 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.

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PERSONNEL / PHONE LIST

General Manager, Operations	Diane Corwin	Office: (304) 212-0437 Mobile (304) 216-9959
Production Manager	John Landis	Office: (304) 212-0434 Mobile: (304) 216-6854
WV State Inspector	Gayne Knitowski	Office: (304) 241-7112 Cell (304) 546-8171

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WW-4A
Revised 6-07

1) Date: 6-7-2019
2) Operator's Well Number
Nancy Tennant 3
3) API Well No.: 47 - 061 - 00531

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

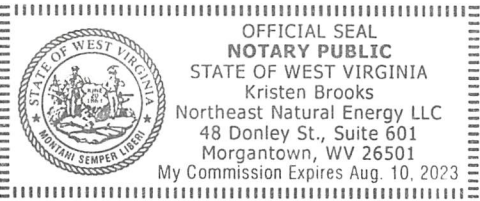
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Michael A. Keith, Gregory G, and Jane Ann Reynolds</u>	Name _____
Address <u>1176 Sands Dr.</u>	Address _____
<u>Fairmont, WV 26554</u>	
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Murray American Energy Inc</u>
	Address <u>46226 National Road</u>
	<u>St. Clairsville, OH 43950</u>
(c) Name _____	Name _____
Address _____	Address _____
6) Inspector <u>Gayne Knitowski</u>	(c) Coal Lessee with Declaration
Address <u>P.O. Box 108</u>	Name _____
<u>Gormanian, WV 26720</u>	Address _____
Telephone <u>304-546-8171</u>	

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: Hollie Medley
 Its: Regulatory Manager
 Address 48 Donley St., Suite 601
Morgantown, WV 26501
 Telephone 304-212-0422

Subscribed and sworn before me this 12th day of June, 2019
Kristen Brooks Notary Public
 My Commission Expires Aug. 10, 2023

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.

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47-061-00531P

WW-9
(5/16)

API Number 47 - 061 - 00531
Operator's Well No. Nancy Tennant No. 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

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.? _____

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- 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: NA

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

-If oil based, what type? Synthetic, petroleum, etc. NA

Additives to be used in drilling medium? Bentonite

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Removed 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 April 1, 2016, 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 Hollie Medley
Company Official (Typed Name) Hollie Medley
Company Official Title Regulatory Manager

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Subscribed and sworn before me this 12th day of June, 2019, 20
Kristen Brooks
Notary Public



OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
Kristen Brooks
Northeast Natural Energy LLC
48 Donley St., Suite 601
Morgantown, WV 26501
My Commission Expires Aug. 10, 2023

My commission expires Aug. 10, 2023

Proposed Revegetation Treatment: Acres Disturbed 0.8 Prevegetation pH TBD

Lime 2 Tons/acre or to correct to pH 7

Fertilizer type 19-19-19

Fertilizer amount 500 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:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Maureen J. Knutson

Comments: _____

Title: Inspector

Date: 6/13/2019

Field Reviewed? () Yes () No

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N/A

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

Operator Name: NNE Resources LLC
Watershed (HUC 10): Dunkard Creek Quad: Blacksville
Farm Name: Nancy Tennant No. 3

- 1. List the procedures used for the treatment and discharge of fluids. Include a list of all operations that could contaminate the groundwater.

NA

- 2. Describe procedures and equipment used to protect groundwater quality from the list of potential contaminant sources above.

- 3. List the closest water body, distance to closest water body, and distance from closest Well Head Protection Area to the discharge area.

- 4. Summarize all activities at your facility that are already regulated for groundwater protection.

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- 5. Discuss any existing groundwater quality data for your facility or an adjacent property.

N/A

6. Provide a statement that no waste material will be used for deicing or fill material on the property.

7. Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direction on how to prevent groundwater contamination.

8. Provide provisions and frequency for inspections of all GPP elements and equipment.

Signature: Hollimedy

Date: 6-12-19

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XMap® 7

APPROXIMATE AREA OF DISTURBANCE = 0.80 ACRES
ALL DISTURBED AREAS WILL BE RECLAIMED AFTER PLUGGING.



SR 29/4

0-5% GRADE

12" WIDE EXISTING WELL ROAD
APPLY STONE AS NEEDED.

5-10% GRADE

INSTALL 8" SOCK OR SILT FENCE
AS NEEDED

STOCK PILE
AREA

METAL WASTE TANK
640 CF
114 BARRELS
4788 GALLONS

50' BY 60' PAD SIZE
APPLY STONE AS NEEDED

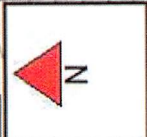
10-15% GRADE

0-5% GRADE

15-20% GRADE

0-5% GRADE

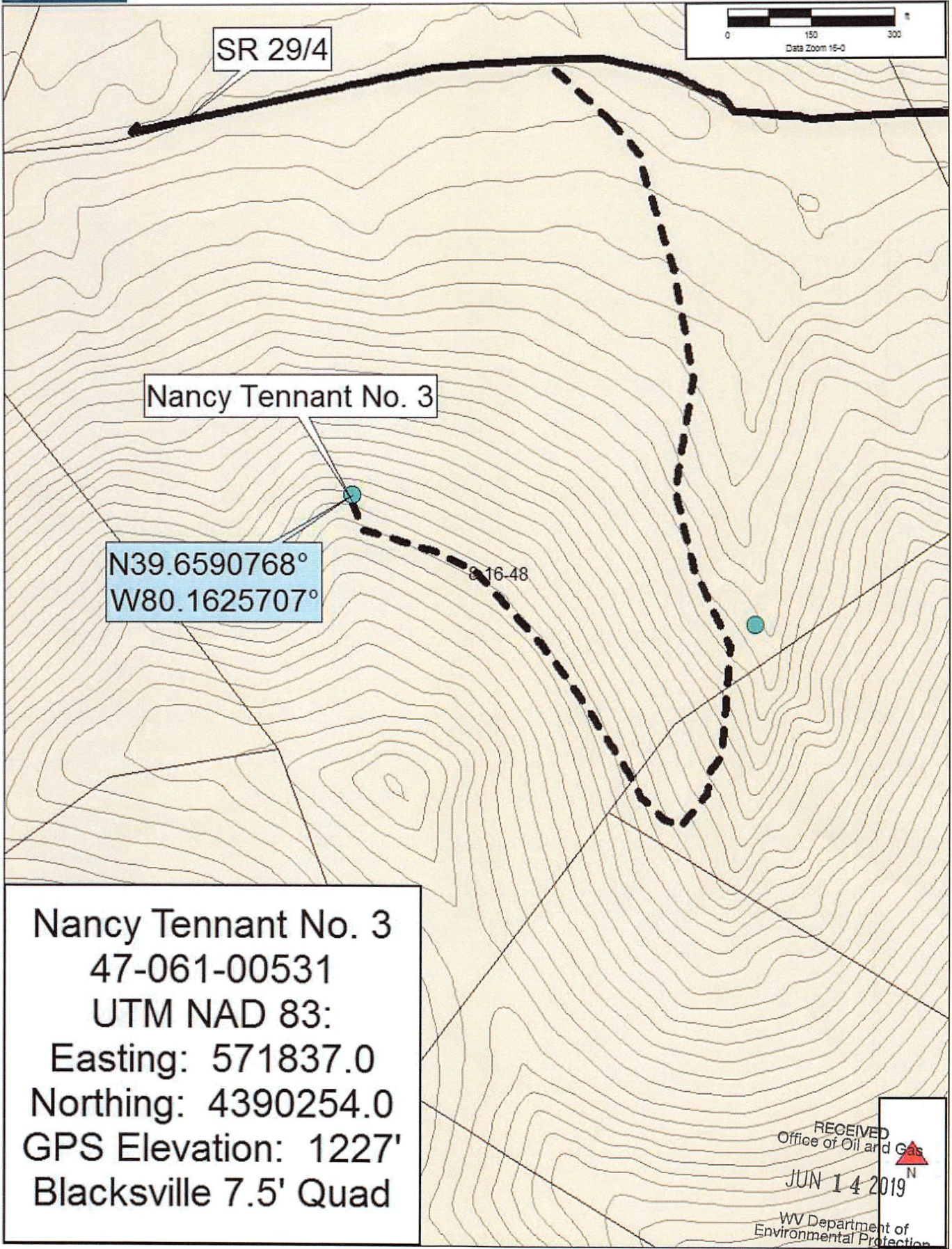
15-20% GRADE



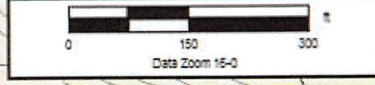
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WW-8 REC PLAN
NANCY TENNANT NO. 3
47-061-00531

47-061-00531P



SR 29/4



Nancy Tennant No. 3

N39.6590768°
W80.1625707°

16-48

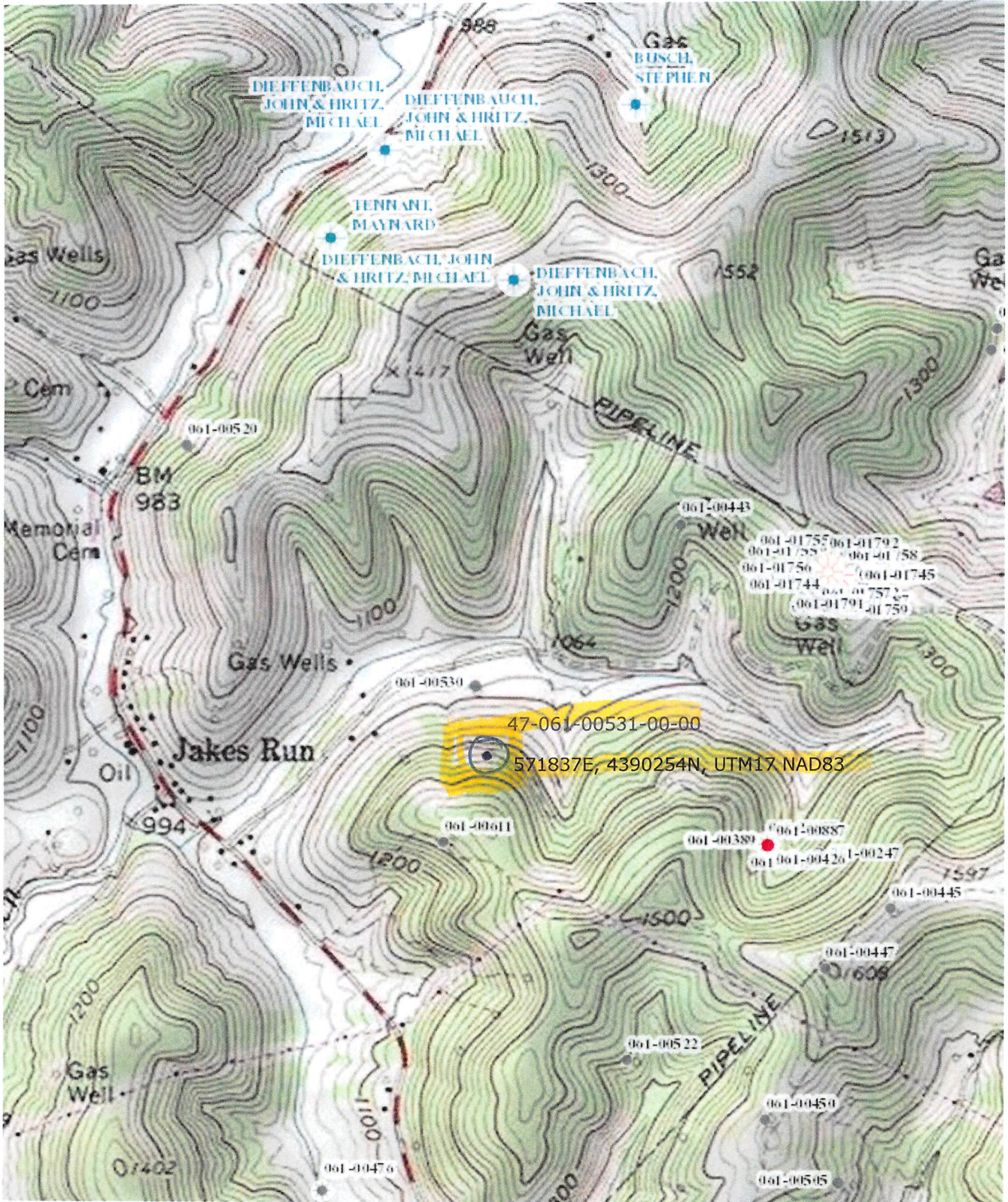
Nancy Tennant No. 3
47-061-00531
UTM NAD 83:
Easting: 571837.0
Northing: 4390254.0
GPS Elevation: 1227'
Blacksville 7.5' Quad

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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: 47-061-00531 WELL NO.: No 3

FARM NAME: Nancy Tennant

RESPONSIBLE PARTY NAME: NNE Resources LLC

COUNTY: Monongalia DISTRICT: Clay

QUADRANGLE: Blacksville

SURFACE OWNER: Michael A. Keith, Gregory G, and Jane Ann Reynolds

ROYALTY OWNER: Michael A. Keith, Gregory G, and Jane Ann Reynolds

UTM GPS NORTHING: 4390254.0

UTM GPS EASTING: 571837.0 GPS ELEVATION: 1,227'

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 : Post Processed Differential

Real-Time Differential

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.

Holl:Mealy
Signature

Regulatory Manager
Title

6-12-19
Date

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