

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

Harold D. Ward, Cabinet Secretary www.dep.wv.gov

Tuesday, June 29, 2021 WELL WORK PLUGGING PERMIT Vertical Plugging

VIKING INTERNATIONAL RESOURCES CO., INC. 1300 FORT PIERPONT DR., SUITE 201 MORGANTOWN, WV 26508

Re: Permit approval for N.U.MELLENIX #9 47-085-07912-00-00

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.

ames A. Martin Chief

Operator's Well Number: N.U.MELLENIX #9 Farm Name: KERNS, JOSEPH ETAL. U.S. WELL NUMBER: 47-085-07912-00-00 Vertical Plugging Date Issued: 6/29/2021

Promoting a healthy environment.

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. <u>Failure to adhere to the specified permit</u> 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.

V F

				47,08507912
NW−4 Rev.	B 2/01		W	ate 2021 perator's 2021 ell No. Mullenax N.U. #9 PI Well No. 47-085 -07912
		DEPARTMENT OF ENVIR OFFICE OF (ST VIRGINIA ONMENTAL PROTECT OIL AND GAS	
	(If "C	APPLICATION FOR A PERM .1/ Gas <u>×</u> _/ Liquid Gas, Production <u>×</u> or Unc	l injection	/ Waste disposal/) Deep/ Shallow
5)	Location: Ele Dis	strict Grant	County Ritchie	Quadrangle Cairo
6)	Well Operator Address	Virco 1300 Fort Pierpont Dr., Suite 201 Morgantown, WV 26508	7)Designated Ag Addr	ent Brittany Woody ess 1300 Fort Pierpont Dr., Suite 201 Morgantown, WV 26508
9)	Name Derek H	L and Gas Inspector to be notified Name Derek Haught		ractor
	Address PO		Address_	

- - -- --

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

See Attachment

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MAY 28 2021

WV Department of Environmental Protection

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

Work order approved by inspector

Derek M. Haught

5/26/21 Date

07/02/2021



Procedure for Setting Downhole Plug:

- 1. Verify all HSE requirements are understood and followed
- 2. Verify proper documentation is included in working procedure
- MIRU plugging rig and equipment. Install all sediment and erosion controls and secondary containment.
- Dig out around wellhead and set 4-5 ft of 20" conductor. Hand cement outside of conductor with bag cement.
 - a. This is to control and capture inadvertent returns from the backside of the 6-1/4" casing
- Check pressures and bleed off if present. RU and pull rods and tubing out of the well if present. Tally tubing if pulled and then NORM test.
- 6. Check TD with cable tools
 - a. NOTE: If TD is significantly different from the well record TD notify WVDEP Inspector as well as SWN manager and engineer
- 7. TIH w/ work string to TD, pump tubing capacity, pump 30 bbls of 6% gel, spot cement plug
- from TD 1550 ft (25 sacks Class A)
- TOOH w/ work string to 1400 ft, spot cement plug from 1400 ft 1300 ft (17 sacks Class A)
- TOOH w/ work string above cement plug and flush tubing to ensure cement is clear of pip. WOC
- 10. Check TOC @ 1300 ft, reset plug if needed, if not TOOH w/ work string to 1000 ft
- 11. Pump 15 bbls of 6% gel then spot cement plug from 1000 ft 900 ft (17 sacks Class A)
- 12. TOOH w/ work string. Find free point on 6 1/4" casing (Est. free point @ 600 -700 ft), and cut/ rip casing (around 650 ft)
- 13. TOOH w/ 6 1/4" casing pulling several joints
- 14. TIH w/ work string to set cement plug across casing cut to 700ft. Pump 37 bbls of 6% gel ahead and spot cement plug from 700 ft 600 ft (31 sacks Class A)
- 15. TOOH w/ work string. Pull remaining 6-1/4" casing and NORM test.
- 16. TIH w/ work string to 300 ft, if well has not circulated pump 6% gel until wellbore circulates. Then spot cement plug from 300 ft 200 ft (44 sacks Class A),
- 17. TOOH w/ work string to 100 ft. Spot cement plug from 100 ft Surface (67 sacks Class A)
- 18. TOOH w/ work string, top off well with cement if needed
- 19. Erect monument per WVDEP regulations
- 20. RDMO equipment, dispose of circulated fluids properly, reclaim location and access road per WVDEP regulations

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WV Department of Environmental Protection

TD 1692

47085079128

P&A

Well Info:

Well Name - N.U. Mullenax #9 API - 47-085-0-7912 Location - 39.135870, -81.197184 County, State - Ritchie, WV Elevation - 860 ft TD - 1692 ft Well Casing Record -

Casing Size	Casing Depth	Comment
10"	175 ft	Pulled – Open Hole 12"
8-1/4"	940 ft	Pulled 300 ft
6-1/4"	1350 ft	Left in well – Open Hole 7-7/8"
2-3/8"	1688 ft	Open Hole – 6"

Perforations -

Shot Interval: 1677' – 1687'

Comments -

Hole diameter sizes are assumptions. No record of hole sizes in well file.

Purpose:

Provide a procedure for safely and effectively plugging & abandoning a well.

Scope:

This procedure pertains to all SWN Production Company, LLC (SWN) personnel and third parties involved in or near the following procedure on a SWN location in the SW Appalachia Division.

HSE:

- Must wear 4-Gas Monitor at all times, powered on, and calibrated up to date .
- Complete JSEA, LOTO, and Hot Work documents as needed .
- Follow proper PPE requirements per "2015 HSE Handbook". Verify pressure control 0 equipment integrity
- Always express STOP work authority if deemed necessary .
- Hold pre-job safety meeting 0
- Must follow SWN Conventional Well P&A Minimum Requirements Document .
- Access road and location to be constructed per WVDEP regulations and pre-seeded .
- All tubulars pulled from the well need to be NORM tested. Contractor gets all salvage pulled from the well
- All fluids circulated from the wellbore are to be disposed of properly and documentation provided

Responsibilities:

Production Engineer(s) - Responsible for providing a working procedure specified for the well that the work is being performed on. Responsible for coordinating work and seeing that it is finished in a timely manner.

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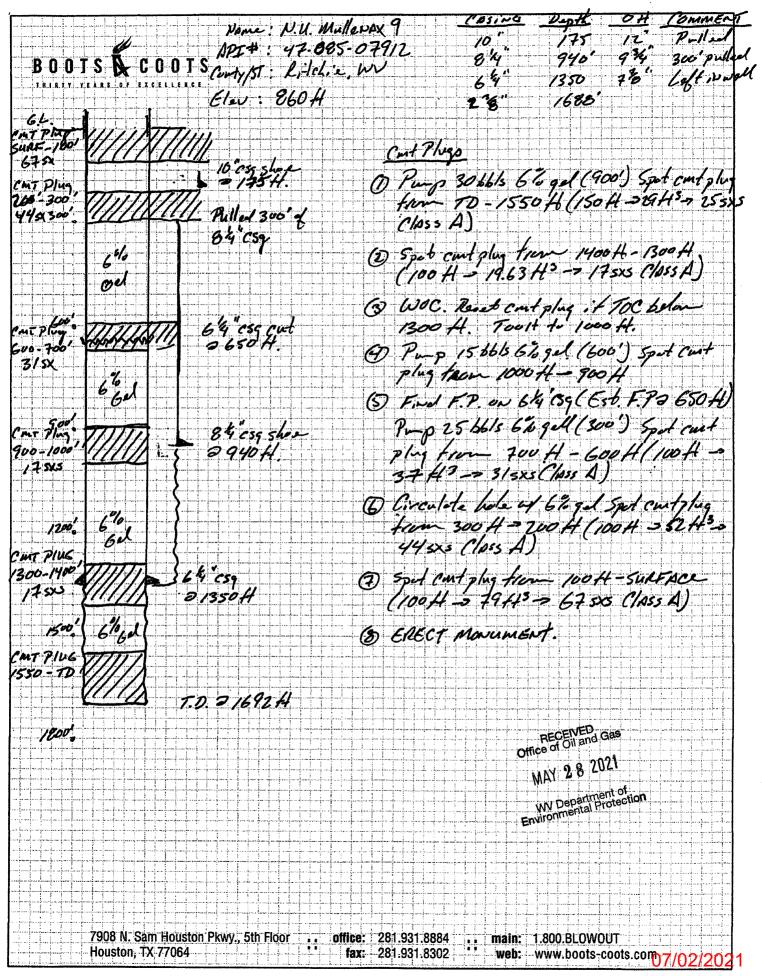
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WW-4A Revised 6-07 4708507912P

1) Date: 2) Operator's Well Number Mullenax N.U. #9

3) API Well No.: 47 -

- 079

085

07912

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

4) Surface Ow	ner(s) to be served:	5) (a) Coal Operator	
(a) Name	Heather M. Mullens	Name	N/A
Address	311 Whitehall Way	Address	
	Cary, NC 27511		
(b) Name	Rebecca L. Dimit	(b) Coal Owr	ner(s) with Declaration
Address	194 Highland Meadows Dr	Name	
	Davisville, WV 26140	Address	
(c) Name	Christopher H. Border	Name	
Address	105 Highland Meadows Dr	Address	
	Davisville, WV 26140		
6) Inspector	Derek Haught	(c) Coal Less	see with Declaration
Address	PO Box 85	Name	
	Smithville, WV 26178	Address	
Telephone	304-206-7613		

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	Virco
RECEIVED Office of Oil and Gas	By:	Brittany Woody
Unice of	Its:	Senior Regulatory Analyst
MAY 28 2021	Address	1300 Fort Pierpont Dr., Suite 201
tment of		Morgantown, WV 26508
WV Department of Environmental Protection	Telephone	304-884-1610
Subscribed and sworn before me the My Commission Expires	3000	ay of ADM 2000 OFFICIAL SEAL Notary Public, State Of West Virginia ELIZABETH A DAY SEAL
My Commission expires 3 10	2023	632 Winery Road Buckhannon, WV 26201 My Commission Expires May 06, 2023
Oil and Gas Privacy Notice		My commission Expires May 06, 2023

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 <u>depprivacyoffier@wv.gov</u>.



MAY 28 2021 WV Department of Environmental Protection

07/02/2021

	RECEIVED Office of Oil and Gas	47-085-0791
WW-9	JUN 3 2021	A DI Museuro 17 085 07912
(5/16)		API Number 47 - 085 _ 07912 Operator's Well No
	WV Department of Environmental Protection	Operators wen No
	STATE OF WE	
	DEPARTMENT OF ENVIRO OFFICE OF O	NMENTAL PROTECTION
	FLUIDS/ CUTTINGS DISPOSA	
Operator Name Virco		OP Code 7434
Watershed (HUC 10) Gille	əspie Run	Quadrangle Cairo
	ore than 5,000 bbls of water to complete	the proposed well work? Yes No 🖌
Will a pit be used? Yes	No Any well effluent v	vill be contained in tanks before disposing off-site
If so, please desc	ribe anticipated pit waste:	
Will a synthetic l	iner be used in the pit? Yes N	If so, what ml.?
Proposed Dispos	al Method For Treated Pit Wastes:	
	Land Application (if selected provide a	completed form WW-9-GPP)
		mber TBD pending selection of plugging contractor)
	Reuse (at API Number)
	Off Site Disposal (Supply form WW-9	for disposal location)
	Other (Explain	
Will closed loop systemb	e used? If so, describe: N/A	
	ed for this well (vertical and horizontal)?	Air, freshwater, oil based, etc. N/A
	nt type? Synthetic, petroleum etc. N/A	
Additives to be used in dri	illing medium? N/A	
	thod? Leave in pit. landfill, removed offs	site, etc. N/A
-If left in pit and	plan to solidify what medium will be use	ed? (cement, lime, sawdust) N/A
	te name/permit number?	
-Landfill or offsi		
		of any load of drill cuttings or associated waste rejected at any

on April 1, 2016, by the Office of Oil and Cas 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 Billtonu ADDAU	
Company Official (Typed Name) Brittany Woody	
Company Official Title Senior Regulatory Analyst	
Subscribed and swom before me this and day of April My commission expires	20 20 Notary Public, State Of West Virginia ELIZABETH A DAY B32 Winery Road Buckhannon, WV 26201 My Commission Expires May 06, 2023
	07/02/2021

47085079128 Operator's Well No._____

Form	W	W	-9
------	---	---	----

posed Revegetation Treat	ment: Acres Disturbe	d ONE Prevegetation pH	5.5
Lime Two	Tons/acre or to c		
Fertilizer type 10-2	20-20		
Fertilizer amount_5	00	lbs/acre	
Mulch 50 Bales		2.5 Tons/acre	
		Seed Mixtures	
Т	emporat. y	Permano	nt
	lbs/acre	Seed Type	lbs/acre
Seed Type	1051 4010	Orchard Grass	30%
		Rye (annual @BT)	35%
		Timothy (Climax)	25%
		Clover (Med.Red)	10%

/

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: Derek M. Haught	
Comments:	
	RECEIVED Office of Oil and Gas
	MAY 2 8 2021
	WV Department of Environmental Protection
Title: Oil & Gas Inspector	Date: 5/26/21
Field Reviewed? ()Yes ()No

07/02/2021

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WW-9- GPP Rev. 5/16 Page _____ of ____ API Number 47 - 085 ___ 07912 Operator's Well No.

> RECEIVED Office of Oil and Gas

Quad: Cairo

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

Operator Name: Virco

Watershed (HUC 10): Gillespie Run

Farm Name:

N/A

N/A

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

Plug to abandon operations.

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

Containment will be in place around the well. A portable pit will be used for fluids.

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

MAY 2 8 2021 WV Department of Environmental Protection

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

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

WW-9- GPP Rev. 5/16 4708507912 Page 2 of 2 API Number 47 - 085 - 07912 Operator's Well No.

N/A

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

No waste materials will be used for the deicing of area or equipment. Waste materials, if any, will not be used for material fill on the property.

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

All employees are assigned spill protection training. Spill kits and containment are available and utilized on every work site.

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

Inspections will be done before and during operations by designated employees.

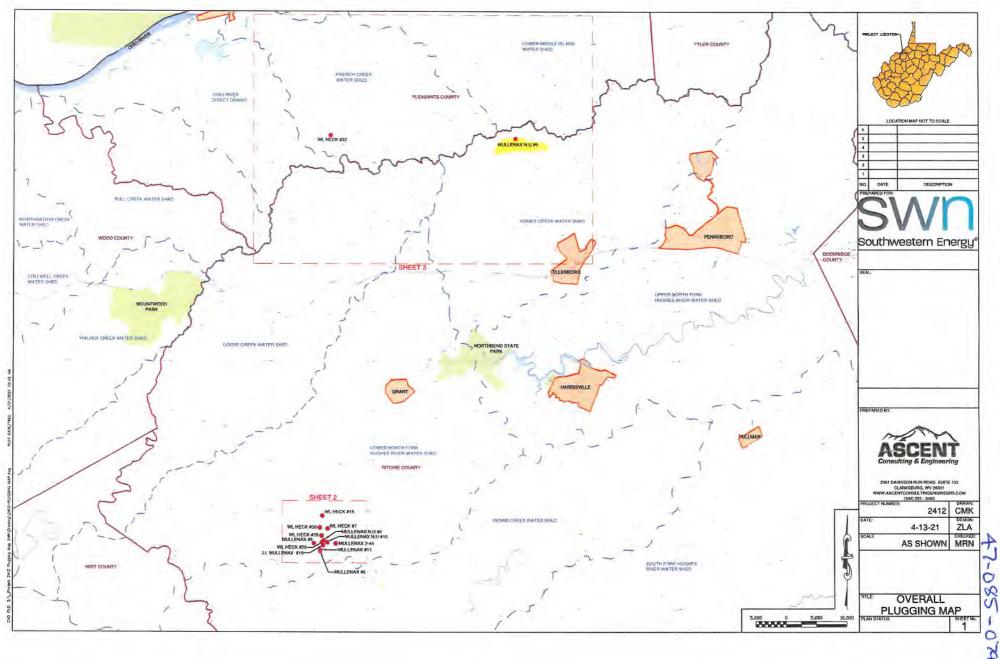
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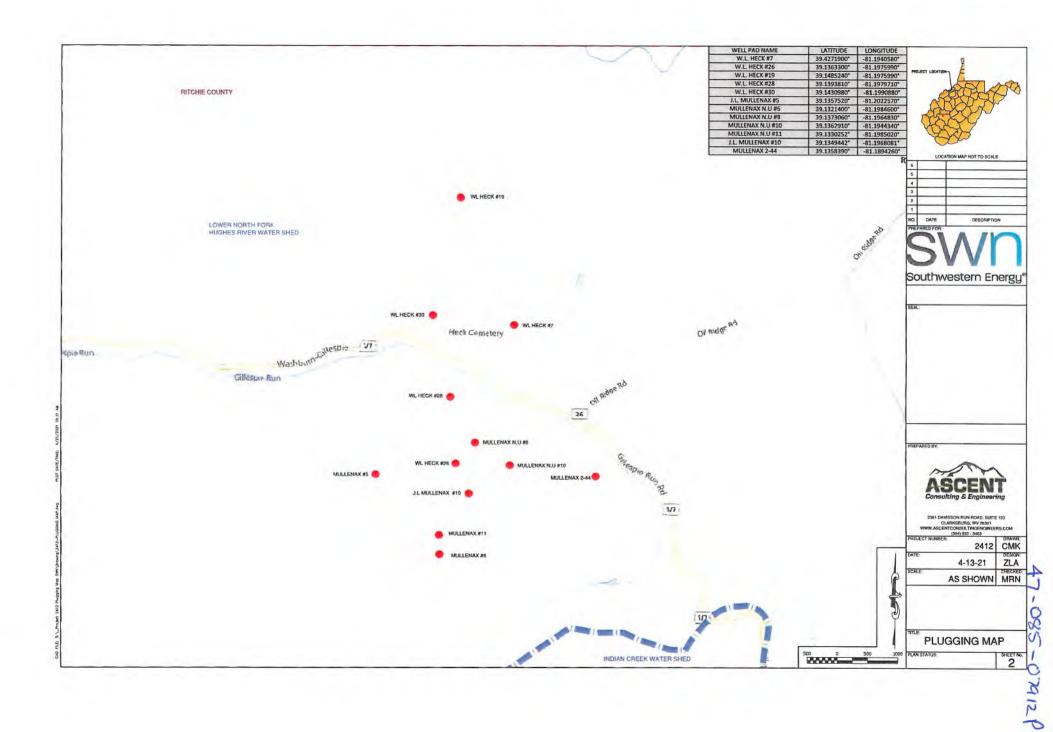
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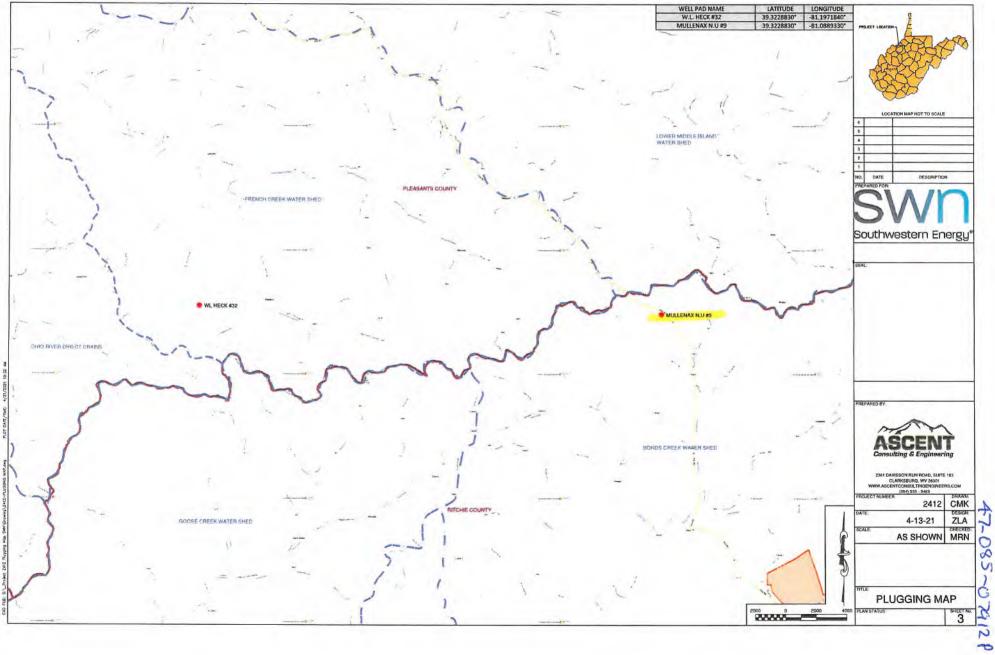
WV Department of Environmental Protection

07/02/2021



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8-30-06	
West Virginia Department of E Office of Oil a	
WELL LOCATION	
API: 47-085-07912	WELL NO.: 9
FARM NAME: Mullenax N.U.	
RESPONSIBLE PARTY NAME: VIRCO	
COUNTY: Ritchie	DISTRICT: Grant
QUADRANGLE: Cairo	
SURFACE OWNER: Heather M. Mullens, Rebe	ecca L. Dimit, & Christopher H. Border
ROYALTY OWNER: Heather M. Mullens, Rebe	
UTM GPS NORTHING: 4,343,128.00	
	GPS ELEVATION: 860'
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:

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

Survey grade GPS × : Post Processed Differential

3.

WW-7

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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.

Real-Time Differential X

Buttony Mody	Senior Regulatory Analyst	5/27/21	
Signature	Title	Date	
0		07/02/20)21

Mulling NU#9 4708507912F

11/10/2016

PLUGGING PERMIT CHECKLIST

Pluggi	ng Permit
V	WW-4B
V	WW-4B signed by inspector
V	WW-4A
M	SURFACE OWNER WAIVER or PROOF THAT APPLICATION WAS SENT BY REGISTERED OR CERITFIED MAIL
NA	COAL OWNER/COAL OPERATOR/COAL LESSEE WAIVERS or PROOF THAT APPLICATION WAS SENT /BY REGISTERED OR CERTIFIED MAIL
\checkmark	WW-9 PAGE 1 (NOTARIZED)
V	, WW-9 PAGE 2 with attached drawing of road, location, pit and proposed area for land application
V	WW-9 GPP PAGE 1 and 2 if well effluent will be land applied
V	RECENT MYLAR PLAT OR WW-7
\square	WELL RECORDS/COMPLETION REPORT
\square	TOPOGRAPHIC MAP OF WELL, SHOWING PIT IF PIT IS USED
\square	MUST HAVE VALID BOND IN OPERATOR'S NAME
NA	CHECK FOR \$100 IF PIT IS USED

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