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west virginia department of environmental protection

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

Harold D. Ward, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Thursday, April 18, 2024  
WELL WORK PERMIT  
Vertical / New Drill

EAGLE NATRIUM LLC  
15696 ENERGY RD., STATE RT 2

PROCTOR, WV 26055

Re: Permit approval for EAGLE NATRIUM/ BW 101  
47-051-02513-00-00

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: EAGLE NATRIUM/ BW 101  
Farm Name: EAGLE NATRIUM LLC  
U.S. WELL NUMBER: 47-051-02513-00-00  
Vertical New Drill  
Date Issued: 4/18/2024

## 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.

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### CONDITIONS

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1. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6-20, which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
2. Pursuant to 35 CSR § 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
3. Pursuant to 35 CSR § 4-19.1.c, if the operator is unable to sample and analyze any water well or spring within one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
5. 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.
6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours.
7. Well work activities shall not constitute a hazard to the safety of persons.
8. Operator shall provide the Officer of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to [DEPOOGNotify@wv.gov](mailto:DEPOOGNotify@wv.gov) within 30 days of commencement of drilling.

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

1) Well Operator: Eagle Natrium, LLC 39600 Marshall Franklin New Martinsville  
Operator ID County District Quadrangle

2) Operator's Well Number: #101 Brine Well 3) Elevation: 648'

4) Well Type: (a) Oil \_\_\_\_\_ or Gas Fresh Water Inj  
(b) If Gas: Production \_\_\_\_\_ / Underground Storage \_\_\_\_\_  
Deep X / Shallow \_\_\_\_\_

5) Proposed Target Formation(s): Salina Salt Proposed Target Depth: 6,700-6,800 ft

6) Proposed Total Depth: 6,800 Feet Formation at Proposed Total Depth: Salina

7) Approximate fresh water strata depths: 20'-70'

8) Approximate salt water depths: N/A

9) Approximate coal seam depths: 204'-208'; 400'-405'; 1,025'-1,028'

10) Approximate void depths, (coal, Karst, other): N/A

11) Does land contain coal seams tributary to active mine? No

12) Describe proposed well work and fracturing methods in detail (attach additional sheets if needed)

Bore holes will be drilled, casing set as per the casing/tubing program, then No. 1 Brine field will be intercepted.

13) **CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS			FOOTAGE	INTERVALS	CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	Fill -up (Cu. Ft.)
Conductor	26"	X	169 lb/ft	12'	12'	
Fresh Water	20"	J-55	94 lb/ft	82'	82'	217
Coal	N/A	N/A	N/A	N/A	N/A	N/A
Intermediate	13-3/8"	J-55	54.5 lb/ft	2,200'	2,200'	3,083
Production	9-5/8"	HCL-80	53.5 lb/ft	6,682'	6,682'	4,198
Tubing						RECEIVED Office of Oil and Gas JAN 02 2024
Liners						

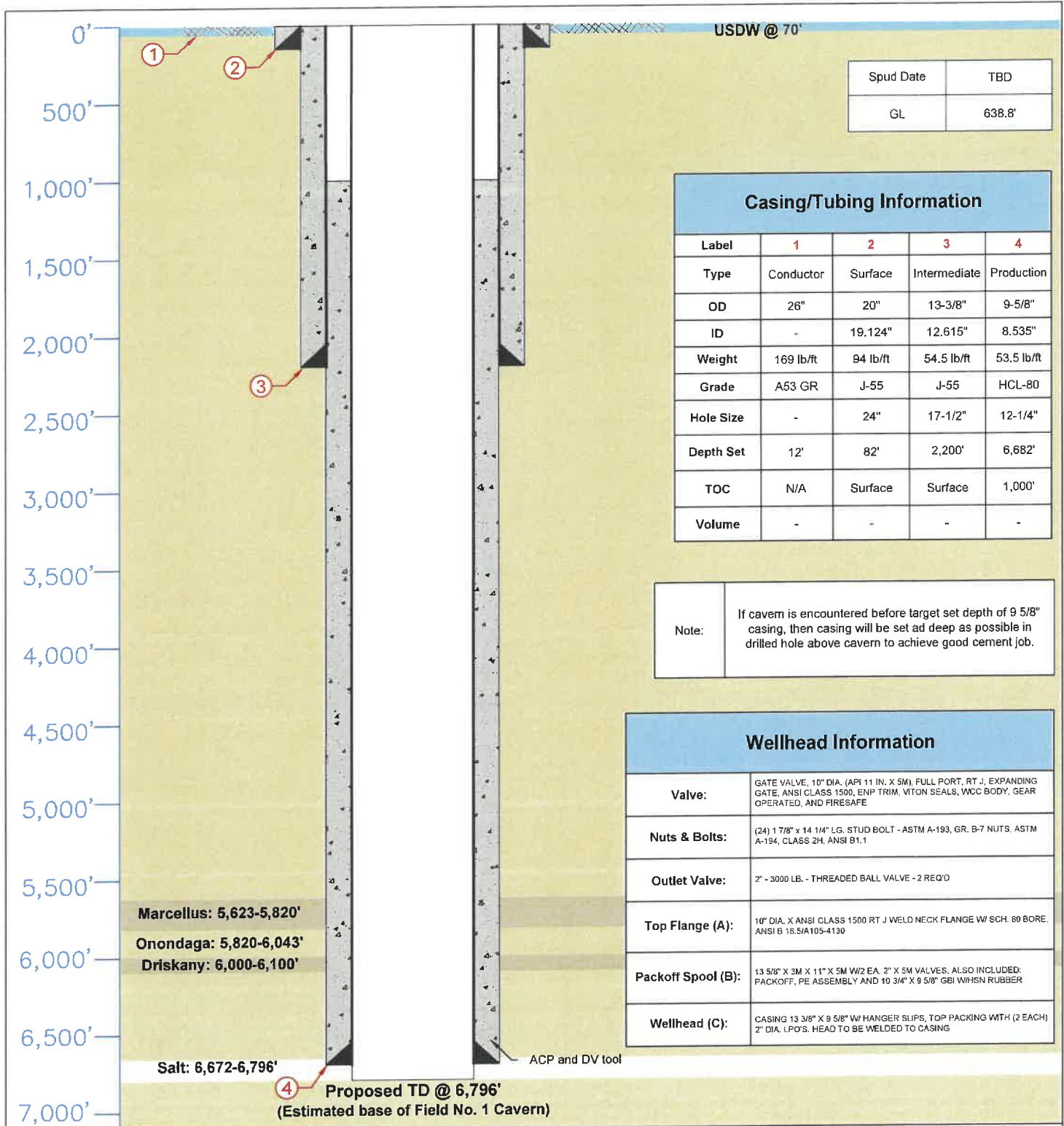
Packers: Kind: N/A

Sizes: N/A

Depths Set N/A

WV Department of  
Environmental Protection

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<b>LONQUIST &amp; CO. LLC</b> <b>PETROLEUM ENGINEERS</b> <b>ENERGY ADVISORS</b> <small>AUSTIN - HOUSTON - CALGARY - WICHITA</small> <small>BEVERLY - COLLEGE STATION - BATON ROUGE - EDMONTON</small>	<b>Westlake Natrium</b>		<b>Westlake #101 Brine Well - Fresh Water Injection</b>	
	<b>Country:</b> USA		<b>State/Province:</b> West Virginia	<b>County/Parish:</b> Marshall
	<b>Serial:</b> TBD		<b>API:</b> TBD	<b>Well Type/Status:</b> FW Injection
	<b>Field:</b> #1 Brine Field		<b>Lat:</b> 39.745148	<b>Long:</b> 80.847565
	<b>Location:</b> TBD		<b>Project No:</b> F2340	<b>Date:</b> 12/06/2023
Texas License F-22610  12912 Hill Country Blvd. Ste F-200 Austin, Texas 78738 Tel: 512.732.9812 Fax: 512.732.9816	<b>Drawn:</b> LMM		<b>Reviewed:</b> PJS	<b>Approved:</b> RCH
	<b>Rev No:</b> 1		<b>Notes:</b>	

01/30/2026



Westlake Natrium  
#101 Brine Well – Fresh Water Injection  
Natrium, West Virginia

HIGH LEVEL DRILLING PROCEDURE  
(Not for Field Execution)




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		<b>High Level Drilling Procedure</b>		Project No.: 2340			
		<b>Westlake Natrium</b> <b>#101 Brine Well – Fresh Water Injection</b>		Date: October 2023			
				Page: 2 of 3			
Well: #101 Brine Well		State: West Virginia		Location: TBD		County: Marshall	
Well API#: TBD		Operator: Westlake		Field: #1 Brine		Current Status: Proposed	

**INTRODUCTION:**

Westlake Natrium ("Westlake") contracted Lonquist Field Service, LLC ("LFS") to drill a new fresh water injection well into the existing brine production Field No. 1 at its Natrium facility in West Virginia. This drilling procedure presents the high-level plan to drill and complete the well in accordance with current WV DEP requirements. The target formation is the Salina F4 1<sup>st</sup> salt. The well is planned to have a 26" conductor casing, 20" surface casing, 13-3/8" intermediate casing and 9-5/8" production casing.

The new injection well will have the following proposed wellbore configuration:

- 26", 169 lb/ft, A53, Conductor Pipe – ~12' (No Cement – Driven)
- 20", 94 lb/ft, J-55, BTC, Surface Casing (Fresh water pipe) – ~82' (Cemented to surface)
- 13-3/8", 54.5 lb/ft, J-55, BTC, Intermediate Casing – Surface to ~2,200' (Cemented to surface)
- 9-5/8", 53.5 lb/ft, HCL-80, LTC, Production Casing – Surface to ~6,682' (10' below projected top of Salina F4 1<sup>st</sup> Salt – Cemented to ~1,000')

A proposed wellbore schematic is attached. The following points outline the high-level steps of the drilling operations:

**Conductor Pipe**

- Move in driving rig/drilling rig for conductor casing
- Install 6' x 6' tin horn cellar
- Drive 26" conductor casing to ~12'

**Surface (Fresh Water) Casing Section**

- MIRU drilling rig, closed loop system, and solids control equipment
- Use 24" bit and air drilling equipment to drill surface casing hole down to approximately ~82'
  - 24" Hammer Bit
  - Air and soap
- Set 20" Surface Casing at ~82' and cement to surface
  - Run caliper log in surface hole to confirm cement volumes
  - Pump 100% excess cement (Blend as per WWDP requirements)
  - Run cement bond log after WOC (Wait on cement time as per WWDP requirements)


**Intermediate Casing Section**

- Use 17-1/2" bit and air drilling equipment to drill intermediate hole down to approximately 2,200'
  - 17-1/2" PDC Bit
  - Air and soap
    - If wellbore becomes wet due to water influx and cannot be controlled by increasing air volume, it is recommended to continue drilling with Air / Mist system.
  - 21-1/4" Double Ram BOP's
  - Set intermediate casing below Berea Sandstone
  - Directional tools will be used for deviation control
    - Maintain deviation < 1 Degree
  - If hole appears to be tight while pulling out of hole, be prepared to load hole with fresh water gel prior to running casing.
- Set 13-3/8" Intermediate Casing at ~2,200' and cement to surface

PREPARED BY	DATE	REVISED BY	DATE	APPROVED BY	DATE	Lonquist Field Service, LLC
PJS	10/16/2023	RCH	10/26/2023			Texas Registered Firm No: F-9147

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	<b>High Level Drilling Procedure</b>		<b>Project No.: 2340</b>
	<b>Westlake Natrium</b> <b>#101 Brine Well – Fresh Water Injection</b>		<b>Date:</b> October 2023
			<b>Page:</b> 3 of 3
<b>Well:</b> #101 Brine Well	<b>State:</b> West Virginia	<b>Location:</b> TBD	<b>County:</b> Marshall
<b>Well API#:</b> TBD	<b>Operator:</b> Westlake	<b>Field:</b> #1 Brine	<b>Current Status:</b> Proposed
<ul style="list-style-type: none"> <li>○ Run caliper log in intermediate hole to confirm cement volumes</li> <li>○ Pump 100% excess cement (Blend as per WWDP requirements)</li> <li>○ Run cement bond log after WOC (Wait on cement time as per WWDP requirements)</li> <li>• Install "A" section of the wellhead</li> <li>• Run cased hole logs <ul style="list-style-type: none"> <li>○ Cement bond log</li> </ul> </li> </ul> <p><b>Production Casing Section</b></p> <ul style="list-style-type: none"> <li>• Use 12-1/4" bit to continue drilling to casing set point or into the cavern (whichever occurs first) <ul style="list-style-type: none"> <li>○ 12-1/4" PDC Bit</li> <li>○ Drill with air down to 200' above the Marcellus then load hole with 10.0 ppg brine</li> <li>○ 13-5/8" BOP's <ul style="list-style-type: none"> <li>▪ Annular BOP</li> <li>▪ Slip-Type Rams (Bi-Directional)</li> <li>▪ Pipe Rams</li> <li>▪ Pipe Rams</li> <li>▪ Shear-Blind Rams</li> </ul> </li> <li>○ Drill 12 1/4" hole section to 6,690' in preparation for running 9 5/8" casing <ul style="list-style-type: none"> <li>▪ <b>**NOTE**</b> Field No. 1 cavern may be encountered prior to reaching this depth. If cavern is encountered lost circulation is expected.</li> </ul> </li> <li>○ Directional tools will be used for deviation control <ul style="list-style-type: none"> <li>▪ Maintain deviation &lt; 1 Degree</li> </ul> </li> </ul> </li> <li>• Run open-hole logging suite as per WWDEP requirements</li> <li>• Set 9-5/8" Production Casing and cement up to 1,000' <ul style="list-style-type: none"> <li>○ Target production casing set depth of 6,682' (10' below projected top of Salina F4 1<sup>st</sup> Salt) <ul style="list-style-type: none"> <li>▪ ACP and DV tool set directly above production casing shoe</li> <li>▪ Confirm set depth with engineer</li> <li>▪ Review caliper log to ensure ACP is being set in competent formation and hole</li> <li>▪ <b>**NOTE**</b> While drilling 12 1/4" hole, if cavern is encountered at a depth shallower than the proposed target 9 5/8" casing set depth, then casing will be set as deep as possible above the cavern. ACP and DV tool will allow for 9 5/8" to be cemented if the drilled hole is exposed to the cavern.</li> </ul> </li> </ul> </li> <li>• Install "B" section of the wellhead</li> <li>• Run cased hole logs <ul style="list-style-type: none"> <li>○ Cement bond log</li> <li>○ Multi-finger caliper log</li> <li>○ Magflux thickness log</li> </ul> </li> <li>• Drill out 9 5/8" shoe track with 8 1/4" drill bit and 10.0 ppg brine <ul style="list-style-type: none"> <li>○ Prior to drilling through float shoe perform pressure test of 9 5/8" casing</li> </ul> </li> <li>• Continue drilling 8 1/4" hole until entry into cavern is achieved. <ul style="list-style-type: none"> <li>○ The well target drilled total depth is the top of Field No. 1 cavern (depth not discretely known / TBD) <ul style="list-style-type: none"> <li>▪ Estimated total depth and base of Field No. 1 cavern is 6,796' (which is also the estimated base of the Salina F4 1<sup>st</sup> salt)</li> <li>▪ Total proposed permitted depth of this well is 6,796'</li> </ul> </li> </ul> </li> <li>• Install final wellhead assembly, rig down drilling rig, clean location, release well to Westlake</li> </ul>			
<b>PREPARED BY</b>	<b>DATE</b>	<b>REVISED BY</b>	<b>DATE</b>
PJS	10/16/2023	RCH	10/26/2023
<b>APPROVED BY</b>		<b>DATE</b>	Lonquist Field Service, LLC Texas Registered Firm No: F-9147

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WW-2A Surface Waiver  
(4/16)

**SURFACE OWNER WAIVER**

County 051

Operator

Operator well number

EAGLE NATRIUM, LLC  
BW - 101

**INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW2-A**

The well operator named on page WW2A is applying for a permit from the State to do oil or gas well work. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

**NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**

**WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:**

Chief, Office of Oil and Gas  
Department of Environmental Protection  
601 57<sup>th</sup> St. SE  
Charleston, WV 25304  
(304) 926-0450

**Time Limits and methods for filing comments.** The law requires these materials to be served on or before the date the operator files his Application. You have **FIFTEEN (15) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

**Comments must be in writing.** Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons;
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation..."

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

**List of Water Testing Laboratories.** The Office maintains a list of water testing laboratories which you can hire to test your water to establish water quality prior to and after drilling. Contact the Chief to obtain a copy.

**VOLUNTARY STATEMENT OF NO OBJECTION**

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application for a Well Work Permit on Form WW2-A, and attachments consisting of pages 1 through \_\_\_\_ including a work order on Form WW2-B, a survey plat, WW-9, and a soil and erosion plan, all for proposed well work on my surface land as described therein.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

  
\_\_\_\_\_  
Signature  
D. Scott Mills  
\_\_\_\_\_  
Print Name

Date 01/04/2026

Company  
Name  
By  
Its

EAGLE NATRIUM, LLC  
D. SCOTT MILLS  
AGENT  
\_\_\_\_\_  
Signature

Date

Signature

Date

01/30/2026

WW-2A Surface Waiver  
(4/16)

## SURFACE OWNER WAIVER

County 051

Operator

Operator well number

EAGLE NATRUM, LLC  
#101 BRINE WELL**INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW2-A**

The well operator named on page WW2A is applying for a permit from the State to do oil or gas well work. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

**NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.****WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:**

Chief, Office of Oil and Gas  
Department of Environmental Protection  
601 57<sup>th</sup> St. SE  
Charleston, WV 25304  
(304) 926-0450

**Time Limits and methods for filing comments.** The law requires these materials to be served on or before the date the operator files his Application. You have **FIFTEEN (15) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

**Comments must be in writing.** Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation..."

**If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.**

**List of Water Testing Laboratories.** The Office maintains a list of water testing laboratories which you can hire to test your water to establish water quality prior to and after drilling. Contact the Chief to obtain a copy.

**VOLUNTARY STATEMENT OF NO OBJECTION**

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application for a Well Work Permit on Form WW2-A, and attachments consisting of pages 1 through \_\_\_\_ including a work order on Form WW2-B, a survey plat, WW-9, and a soil and erosion plan, all for proposed well work on my surface land as described therein.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

_____ Signature	_____ Date	Company Name By Its	<u>N/A; Eagle Natrum Owns Surface</u>
_____ Print Name			<div style="text-align: center;"> RECEIVED Office of Oil and Gas JAN 02 2024 </div>
		Signature	<div style="text-align: center;"> WV Department of Environmental Protection </div>
			Date

01/30/2026

COAL OPERATOR, OWNER, OR LESSEE WAIVER

County MARSHALL  
Operator N/A Operator's Well Number #101 Brine Well

INSTRUCTIONS TO COAL OPERATOR, OWNER, OR LESSEE

To the coal operator, owner, or lessee named on page WW2-A. You are hereby notified that any objection you wish to make or are required to make by WV Code 22-6-15, 16 or 17, must be filed with the Chief of the Office of Oil and Gas within fifteen (15) days after the receipt of this application by the Office. Mail objections to:

Chief, Office of Oil and Gas  
Department of Environmental Protection  
601 57<sup>th</sup> St. SE  
Charleston, WV 25304  
(304) 926-0499 extension 1654

WAIVER

The undersigned coal operator \_\_\_\_\_ / owner \_\_\_\_\_ / lessee \_\_\_\_\_ / of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

_____	Date _____	Company Name _____	N/A
Signature		By _____	_____
		Its _____	Date _____
		Signature _____	Date _____

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**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE  
Chapter 22, Article 6, Section 8(d)  
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
Eagle Natrium, LLC owns all surface rights	for the location of #101 Brine Well		1026/467

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

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WV Department of  
Environmental Protection

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:  
By: Its:

EAGLE NATRIUM LLC

D. Scott Mills

Agent

01/30/2026

4705102513B

WW-2B1  
(5-12)Well No. N/AWest Virginia Department of Environmental Protection  
Office of Oil and Gas

## NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

Be advised, you have the right to sample and analyze any water supply at your own expense.

Listed below is the laboratory chosen by operator to perform analysis, and contractor chosen to collect sample.

Certified Laboratory Name N/A  
Sampling Contractor \_\_\_\_\_Well Operator No wells within 2,000 ft  
Address \_\_\_\_\_

Telephone \_\_\_\_\_

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underling which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site, the Chief may require the operator to test wells up to 2000 feet from the proposed site.

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4705102513B

**PPG INDUSTRIES  
BW-29 WELL**

NOT TO SCALE

P.P.G. INDUSTRIES INC.  
60.842 ACRES ±

BAYER MATERIAL SCIENCES, LLC  
99.5 ACRES ±

HARRY LEE GOUDY  
100 ACRES ±

AIR PRODUCTS & CHEMICALS INC. TUX DEPARTMENT  
5.52 ACRES ±

BAYER MATERIALS SCIENCES LLC CORP.  
18.78 ACRES ±

BAYER MATERIAL SCIENCES, LLC  
21.627 ACRES±

WELL NO. BW-29  
**STATE PLANE COORDINATES NORTH ZONE (NAD'83)**  
N. 451,917  
E. 1,595,102

LAT=(N) 39.732895  
LONG=(W) 80.827754

UTM (NAD'83) (METERS)  
N. 4,398,128  
E. 514,760

LATITUDE 39° 45' 00"

LONGITUDE 80° 47' 30"

NORTH

DRAIN

PLUGGED WELL 47-51-052IP

WELL # BW-29

20" BUCKEYE FOUND

S 79°24'55"E 1779.99'

N 21°06'03"W 120.00'

N 26°54'30"E 342.12'

WELL # BW-29

REFERENCES

PGP (SURFACE)

UTILITY POLE

UTILITY POLE

WOODS

PGP (SURFACE)

1" = 100'

NOTES ON SURVEY

- TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM NORTH ZONE NAD'83.
- TIES TO REFERENCES ARE BASED ON GRID NORTH 10/30/2012.
- LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 282 AT PAGE 183, DEED BOOK 28 AT PAGE 2, AND OTHER DEEDS.
- SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF MARSHALL COUNTY IN JULY 2012.
- WELL LAT./LONG. (NAD'83) ESTABLISHED BY DGPS(SURVEY GRADE).

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN 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 DIVISION OF ENVIRONMENTAL PROTECTION.

C. Victor Moyers

No. 849  
STATE OF WEST VIRGINIA  
PROFESSIONAL SURVEYOR

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE OCTOBER 30 , 20 12

OPERATORS WELL NO. WELL No. BW-29

API WELL NO. 47 - 051 - 01583M

STATE COUNTY PERMIT REVISED

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 7854P1R (407-69)

PROVEN SOURCE OF ELEVATION OGPS (SURVEY GRADE) SCALE 1" = 500'

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

WELL TYPE : OIL \_\_\_\_\_ BRINE & LIQUID INJECTION X \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_ IF "GAS" PRODUCTION \_\_\_\_\_ STORAGE \_\_\_\_\_ DEEP X \_\_\_\_\_ SHALLOW \_\_\_\_\_

LOCATION :

ELEVATION 780' EXISTING 774' PROPOSED WATERSHED TRIBUTARY OF OHIO RIVER

DISTRICT FRANKLIN COUNTY MARSHALL QUADRANGLE NEW MARTINSVILLE 7.5

SURFACE OWNER PPG INDUSTRIES, INC. ACREAGE 20.23±

ROYALTY OWNER PPG INDUSTRIES, INC. LEASE ACREAGE \_\_\_\_\_

PROPOSED WORK : LEASE NO. \_\_\_\_\_

DRILL X CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR STIMULATE \_\_\_\_\_ PLUG OFF OLD FORMATION \_\_\_\_\_ PERFORATE NEW FORMATION \_\_\_\_\_ PLUG AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUG \_\_\_\_\_ OTHER \_\_\_\_\_ PHYSICAL CHANGE IN WELL (SPECIFY) TARGET FORMATION SALINA ESTIMATED DEPTH 7,000'

WELL OPERATOR PPG INDUSTRIES, INC. DESIGNATED AGENT J. THOMAS HORAN

ADDRESS WV RT. 2, P.O. BOX 191 ADDRESS WV RT. 2, P.O. BOX 191

NEW MARTINSVILLE, WV 26155 NEW MARTINSVILLE, WV 26155

01/30/2026

OFF SET WELL

JS ✓

WR-35  
Rev (8-10)State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well WorkDATE: May 22, 2013  
API #: 47-051-01583

Farm name: PPG Industries, Inc. Operator Well No.: #29 Brine Well

LOCATION: Elevation: 774.0 ft. Quadrangle: New Martinsville, WV

District: Franklin County: Marshall  
Latitude: 6,300 Feet South of 39 Deg. 45 Min. 00 Sec.  
Longitude 10,215 Feet West of 80 Deg. 47 Min. 30 Sec.

Company:

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
PPG Industries, Inc., N. St. Rt. 2, New Martinsville, WV 26155	30" A 53	6 ft.	6 ft.	300
Agent: J. Thomas Horan	20" J-55	203 ft.	203 ft.	432
Inspector: Carl McCune	13-3/8" K-55	2184 ft.	2184 ft.	2140
Date Permit Issued: September 12, 2012	9-5/8" L-80	6383 ft.	6383 ft.	2118
Date Well Work Commenced: Feb. 2, 2013	7" L-80	1800 ft.	1800 ft.	Not applic.
Date Well Work Completed: March 25, 2013				
Verbal Plugging: Not Applicable				
Date Permission granted on: Not Applicable				
Rotary X Cable Rig				
Total Vertical Depth (ft): 6978 ft.				
Total Measured Depth (ft): 11,100 ft.				
Fresh Water Depth (ft.): 180, 200				
Salt Water Depth (ft.): 6873 ft. (rock salt)				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.):				
Void(s) encountered (N/Y) Depth(s)				

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DEC 8 2013

WV Department of  
Environmental Protection

## OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Not Applicable Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ HoursSecond producing formation Not Applicable Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments 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.

JTH  
Signature5/22/13  
Date

## OFF SET WELL

51-01583

Were core samples taken? Yes \_\_\_\_\_ No XWere cuttings caught during drilling? Yes X No \_\_\_\_\_Were Y Electrical, N Mechanical, N or Geophysical logs recorded on this well?  
Y/N Y/N Y/N

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

Perforation, fracturing, and stimulating not performed. Log for geological record not performed.

Formations Encountered:

Top Depth

/

Bottom Depth

Surface:



STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS  
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name EAGLE NATRIUM LLC OP Code 39600

Watershed (HUC 10) OHIO RIVER Quadrangle NEW MARTINSVILLE

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 ☒ ALL WELL EFFLUENT MUST BE CONTAINED IN TANKS AND DISPOSED OF PROPERLY, OFF-SITE.

If so, please describe anticipated pit waste: 9NM

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 \_\_\_\_\_ )  
☐ Reuse (at API Number \_\_\_\_\_ )  
☒ Off Site Disposal (Supply form WW-9 for disposal location)  
☐ Other (Explain A PIT WILL NOT BE UTILIZED)

Will closed loop system be used? If so, describe: DEWATERING SYSTEM

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. AIR, BRINE, BRINE MUD

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

Additives to be used in drilling medium? \_\_\_\_\_

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

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

-Landfill or offsite name/permit number? QUALA (ENVIRO CLEAN) FACILITY EPA ID# 987000783,

SHORT CREEK LANDFILL, PERMIT # SWF-1034/WW0109517

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 [Signature]

Company Official (Typed Name) D. SCOTT MILLS

Company Official Title \_\_\_\_\_

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Office of Oil and Gas

JAN 02 2024

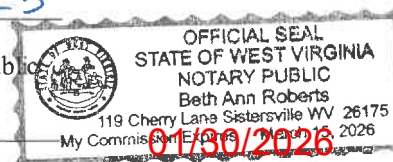
WV Department of  
Environmental Protection

Subscribed and sworn before me this 29<sup>th</sup> day of December, 20 23

Beth Ann Roberts

Notary Public

My commission expires March 15, 2026



Proposed Revegetation Treatment: Acres Disturbed 0 Acres Prevegetation pH \_\_\_\_\_Lime N/A Tons/acre or to correct to pH \_\_\_\_\_Fertilizer type N/AFertilizer amount N/A lbs/acreMulch N/A Tons/acreSeed MixturesTemporary

Seed Type lbs/acre

The disturbed asphalt will be repaired  
upon completion of the well for  
future maintenace access.

Permanent

Seed Type lbs/acre

The disturbed asphalt will be repaired  
upon completion of the well for  
future maintenace access.

## 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: \_\_\_\_\_

Comments: The following documents are enclosed with this application:Well Plat (mylar)Topography MapProposed well configurationAdjacent Brine Well Lithology logWell Pad Location and Access RoadRECEIVED  
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WV Department of  
Environmental ProtectionTitle: [Signature]Date: 12/14/2023Field Reviewed? ( ☒ ) Yes ( ☐ ) NoInside PLANT FENCE

01/30/2026





47051025138

15696 Energy Road  
Proctor, WV 26055  
Tel 304-451-3797 ■ Fax 304-455-2422  
dmills1@Westlake.com

January 9, 2024

**Certified Mail Return Receipt Requested**

Mr. James Martin, Chief  
WV Department of Environmental Protection  
Office of Oil and Gas  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304-2345

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Office of Oil and Gas

JAN 29 2024

WV Department of  
Environmental Protection

Dear Mr. Martin:

**Subject: Revised Forms for Permit Application for Well No. 101,  
API Well Number 47-051-xxx (TBD)**

Please find attached, the updated forms per our recent discussion. Additionally, the proposed Brine Well #101 is to be located inside the existing operating facility located at the address on the application. The tract of land upon which the Well Application is tendered is described in the attached Form WW-2A1, and the impacted area has been calculated to be 0.92 acres during construction activities.

In regards to the naming convention of the application, this facility operates under an existing Underground Injection Control Permit No. UIC3S05101AP issued to Eagle Natrium LLC in 2018. On July 6, 2022, an application for reissuance of the permit was submitted to the DEP. Afterwards, on January 4, 2023, the facility received from the DEP an Issued Order 2023-UIC-1 allowing operation under the expiring permit as the DEP acts on the application for reissuance.

Our name change documentation was available to the facility at the end of the 2022 year, after the application was entered. The Natrium facility has reached out to the different contacts for each program regulating activities/permits for our facility and continue to make those name changes. In regards to the UIC Permit, a name change while in reissuance on complicates matters since the application, the permit, and the issued order need to be consistent. As Natrium awaits action on the UIC Permit reissuance, additional plans are in place to act on the need for wells. In order to maintain the consistency of the permit, the application, the issued order, and the changes in well status, concurrent with the DEP acting on the reissuance, the name Eagle Natrium LLC was maintained. Our name change is simply that, a change in name. The name change is not a change in ownership or operation, simply a name change. Discussions with the DEP acting on the UIC Permit application and the Brine Well #101 construction request ended with a consensus that the consistent use of the Eagle Natrium LLC name would maintain consistency until the UIC Permit is reissued. After reissuance, a name change to update the name on the permit would then correct the matter.

If you have any questions, please call Mr. Steve Clark at (304) 451-3881.

Sincerely,

D. Scott Mills, P.E., BCEE  
Manager – Environmental

Enclosures

01/30/2026

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

Operator Name: Eagle Natrium, LLCWatershed (HUC 10): Ohio RiverQuad: New MartinsvilleFarm Name: Westlake Natrium, LLC

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

N/A

Closed loop system with containment to be utilized (A pit will not be utilized).

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

Closed loop system with containment to be utilized.

Temporary containment will be installed around all equipment and the perimeter of the well pad during drilling and completion operations.

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

Ohio River (&lt;1/4 mile)

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Environmental Protection

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

The Westlake Natrium Plant is a NPDES regulated facility for discharge into the Ohio River (Permit No. WV 0004359). The plant is also covered by the WV AST Rule (Regulation No. 2014-0002939).

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

The groundwater at the Westlake Natrium Plant is contaminated due to historical operations. The plant is covered under a Corrective action permit (No. WVD004336343).

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

No waste material will be used for de-icing 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.

Supervisor will provide training to employees discussing the requirement to prevent groundwater contamination. Training to include spill containment requirement for all oils and fuels.

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

24/7 supervision will be required during all drilling operations. On-going inspections will be performed to prevent groundwater contamination.

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JAN 09 2024

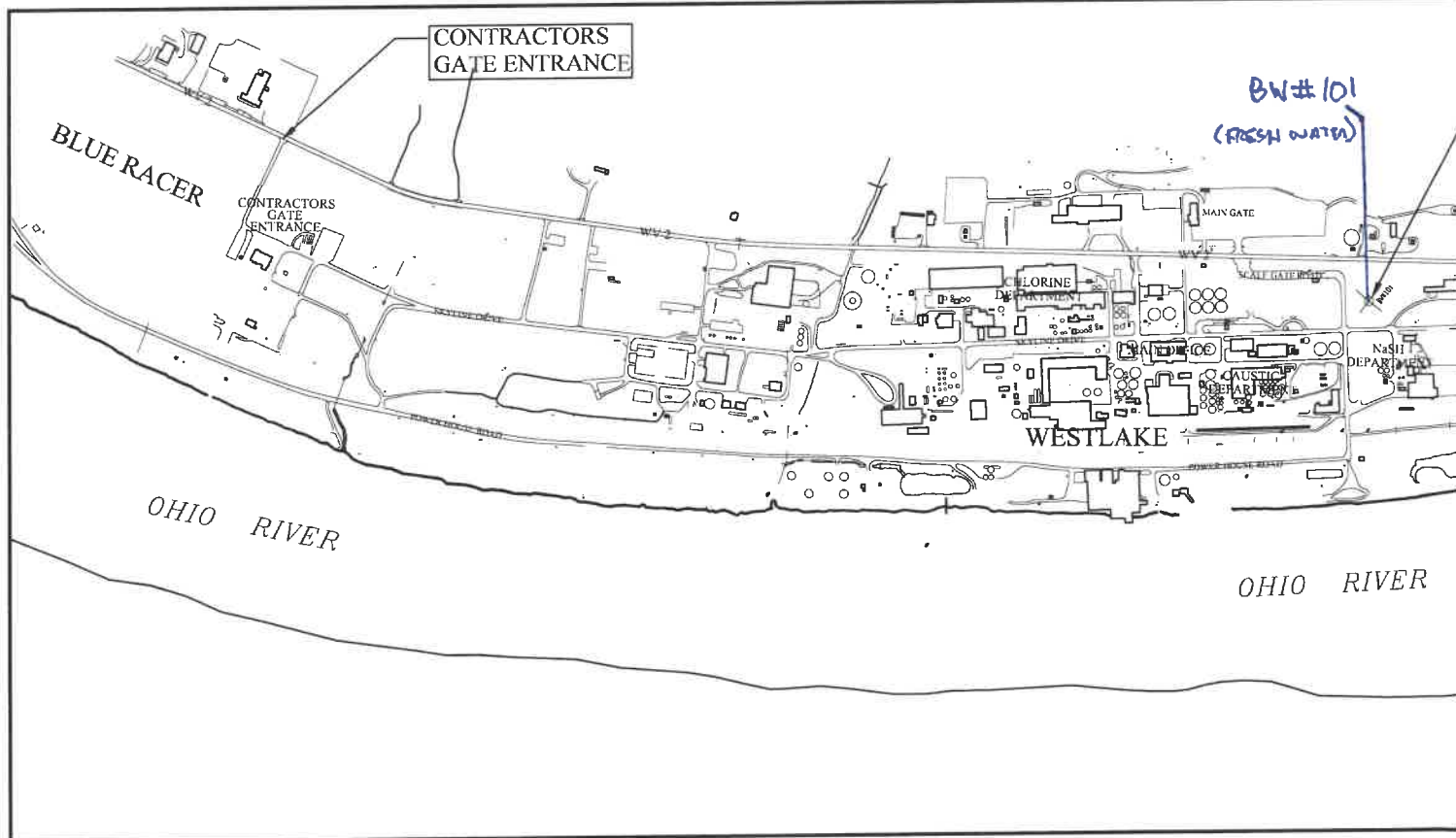
Signature: N/A SG 1

WV Department of  
Environmental Protection

Date: 12/24/2023

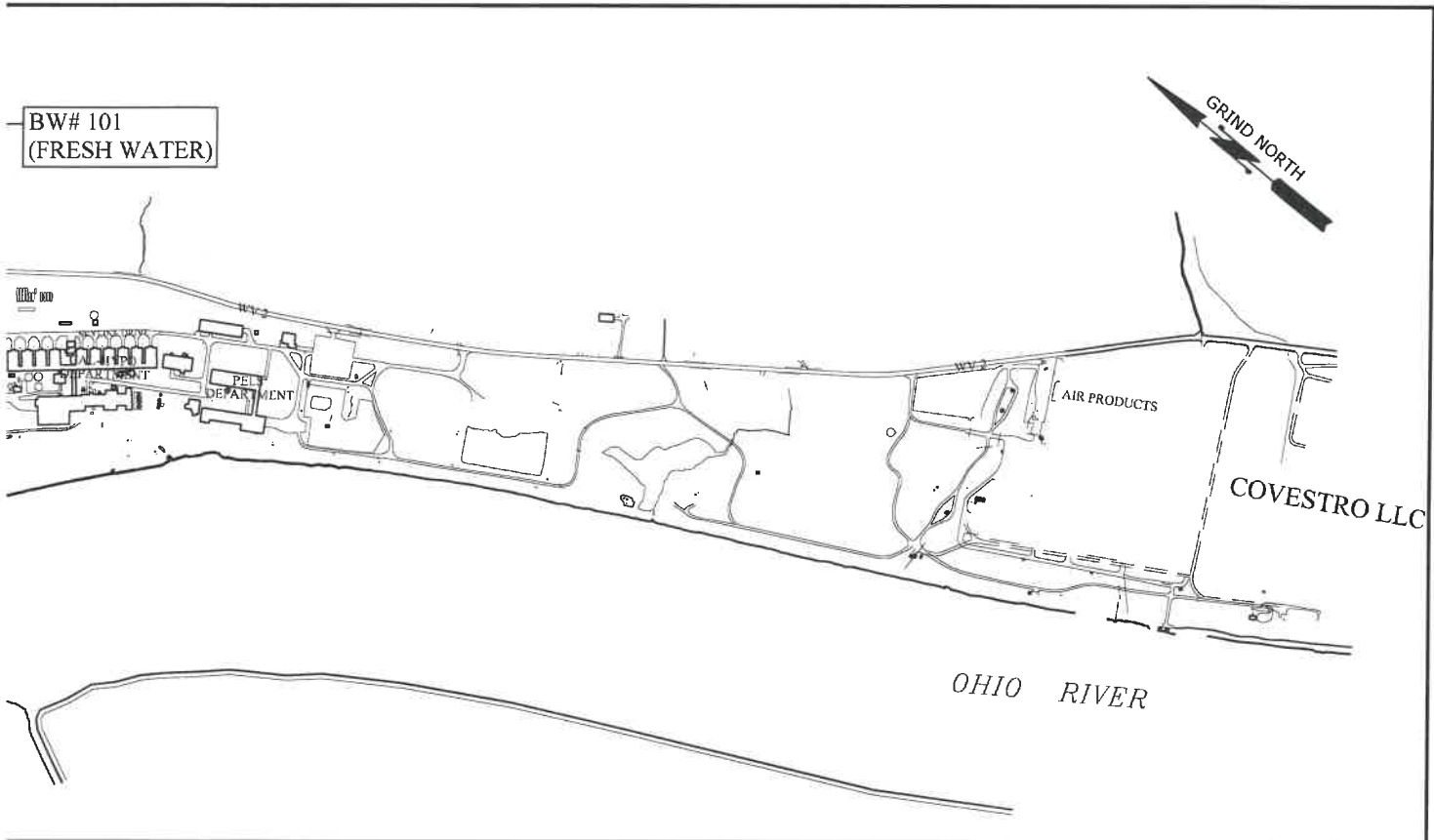
01/30/2026

WELL PAD LOCATION  $\frac{1}{2}$  Access Road  $\frac{1}{2}$



**PLAN**  
SCALE:

# Well PAD Location 2/2



/IEW  
S.

REV.	BY	DATE	DESCRIPTION

DEPT: 50 - GENERAL		
TITLE: BRINE WELL# - 101		
SITE PLAN		
DRAWING TYPE: GENERAL ARRANGEMENT (GAP)		
EQUIPMENT No:		
<b>Westlake</b> <b>NATRIUM</b>	DRAWN: DWS	DATE 10/17/23
	CHECKED: SAC	DATE 10/17/23
	APP' VJ: SAC	DATE 10/17/23
	SCALE: N. T. S.	ACAD YES
	JOB No	
DWG 50-0351	REV	01/30/2026




## ADJACENT BRINE WELL LITHOLOGY

51.01583

Sheet No. 1 of 2

7/1/59

GEOLOGIC DATA FOR COLUMBIA-SOUTHERN CHEMICAL CORPORATION'S  
BRINE WELLS - No. 8 & No. 9  
FRANKLIN DISTRICT, MARSHALL COUNTY, MARIUM, WEST VIRGINIA


 GRADE: 633'

<u>ERA</u>	<u>SYSTEM</u>	<u>SERIES OR GROUP</u>	<u>FORMATION OR MEMBER</u>	<u>ELEV. WELL NO. 8</u>	<u>ELEV. WELL NO. 9</u>
Cenozoic	Quaternary	Recent	(Alluvium)	0- 79	0- 60
				79-T.D.	60-T.D.
Paleozoic				79-1246	60-1250
				79- 246	60- 256
	Pennsylvanian				
		Mononghelia		165- 167	164- 167
			Swickley Coal	240- 246	250- 256
			Pittsburgh Coal	246- 780	256- 785
		Conemaugh		478- 481	469- 487
			Ames Lime	502- 541	495- 528
			Salzburg Sd. (Cow Run)	742- 763	735- 753
			Mahoning Lime	780-1051	785-1035
		Allegheny		Absent	Absent
			Upper Freeport Coal	795- 806	797- 803
			Upper Freeport Lime	850- ?	845- (Horizon)
			Lower Freeport Coal	Absent	882- 884
			Upper Kittanning Coal		1023
			Lower Kittanning Coal (Horizon)	1051-1246	1035-1252
		Pottsville		1051-1074	1035-1090
			Homewood Sand	1107-1120	1109-1115
			Connoquessing Sand	1246-1966	1252-1960
	Mississippian				
		(These are affected by	(Mauch Chunk	1286-1391	1292-1387
		( an (St. Genevie			
		(unconformity in	(Greenbrier Line	1286-1327	1292-1321
		(Northern W.Va. & Western	(Loyalhanna Lime & Sand	1327-1391	1321-1378
		(Penns.			

## ADJACENT BRINE WELL LITHOLOGY.

51-01583

Sheet No. 2 of 2

ERA	SYSTEM	SERIES OR GROUP	FORMATION OR MEMBER	ELEV. WELL NO. 8	ELEV. WELL NO. 9
		Burlington		1391-1945	1378-1955
			Pecora Formation	1391-1966	1378-1960
			Weir Sand	1764-1800	1758-1768
			Berea Sand	1945-1966	1955-1960
	Devonian				
		Upper	(Venango-Gatchill (Chemung (Portage	1966-2590 ? 2590 ? -	1960-2576 ? 2576 ? -
			(Genesee (Hamilton (Marcellus (Tioga Bentonite (Onondaga Limestone	-4435 ? ? 4435-5245 5245-5818 5815 5818-6042	-4430 ? 4430-5236 ? <del>5236-5821</del> 5820 5821-6040
		Middle			
		Lower	(Oriskany Sand (Helderberg Limestone	6042-6109 6109-6397	6040-6119 6119-6406
	Silurian			6397-T.D.	6406-T.D.
		Cayuga		6397-T.D.	6406-T.D.
			Tonoloway Limestone	6397-6497	6406-6507
			Selina Formation	6497-T.D.	6507-T.D.
			Salt	6715-6762	6720-6746
				6771-6780	6753-6776
				6785-6814	6780-6810
				T.D.-6818	6816-6826
					6834-6837
					T.D.-6840

## WELL HEAD CONFIGURATION

[illegible]

CONDUCTOR PIPE - 30" CARBON STEEL, 118.7 LB/FT, 12", NOT CEMENTED, WELDED

FRESH WATER PIPE - 20" API 5L GR 90, 94 LB/FT, 200', CEMENTED TO SURFACE, 8 RAD THRD, & COUPLED, WELDED.

INTERMEDIATE - 13 3/8" K-55, 54.5 LB/FT, 2800' OF CEMENTED TO SURFACE. 8 RAD THRD & SHORT COUPLED, RANGE 3, SEAMLESS.

PRODUCTION - 9 5/8" L-80, 53.5 LB/FT, 6402.00', CEMENTED TO 1000', 8 RAD THRD & LONG COUPLED, RANGE 3, SEAMLESS.

LINER - 7" L-80, 32 LB/FT, 1600.00', NOT CEMENTED, HYDRULIC SET THRD, RANGE 3, SEAMLESS.

VALVE - GATE VALVE, 10" BIA, (API 1) IN A JMO, FULL PORT, RTA EXPANDING GATE, ANSI CLASS 900, TWP TRIM, VITON SEALS, MCC HANDW, GEAR OPERATED, AND FIRESAFE.

NUTS & BOLTS - (20) 1 3/8" x 9 1/2" LG. STUD BOLT - ASTM A-193, GR B-7 (FOR 10" VALVE)

NUTS-A194, CLASS B-A194, CLASS B-A194, B1.1

OUTLET VALVE - 2" - 3000 LB - THREADED BALL VALVE - 4 REP II

WELLHEAD (C) - CASTING 13 3/8" x 9 5/8" W/HAINGER SLIPS, TOP PACKING, & TOP PROTECTION FLANGE W/ (2) 2" x 4" LPT'S

PACKER/HAINGER - 7" 32 LB/FT x 9 5/8" 53.5 LB, H-80, MODEL "C" LINER TOP PACKER W/ 1 1/2" B.O. x 6 FT. LG TIE BACK ACCEPTABLE

7" 32 LB/FT x 9 5/8" 53.5 LB, H-80, MODEL "HSC" HYDRULIC SET LINER HAINGER W/HYDRULIC SET PIN DOWN

TOP FLANGE (A) - 10" BIA x ANSI CLASS 900 RTJ W/BECK FLANGE W/ SCH. 80 WIRE, AS PER ANSI 16.5/4105-1130

BOTTOM FLANGE (B) - 10" BIA x ANSI CLASS 900 RTJ CORROSION FLANGE FOR 9-5/8" X 6" ROUND LTC CASTING, AS PER ANSI 16.5/4105-1130, WITH 2 EA 2" BIA, LPT'S

RING JOINT GASKET - 1032 CAR PLAYED RING GASKET FOR 10" x ANSI CLASS 900 RTJ FLANGE (S. 7470)

WV Department of  
Environmental Protection

[illegible]

01/30/2026



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## Oil&Gas

### Wells, Horizontal Only

#### WellStatus

- Active Well
- Permit Issued
- Permit Application
- Plugged

### Wells, Active Status Only

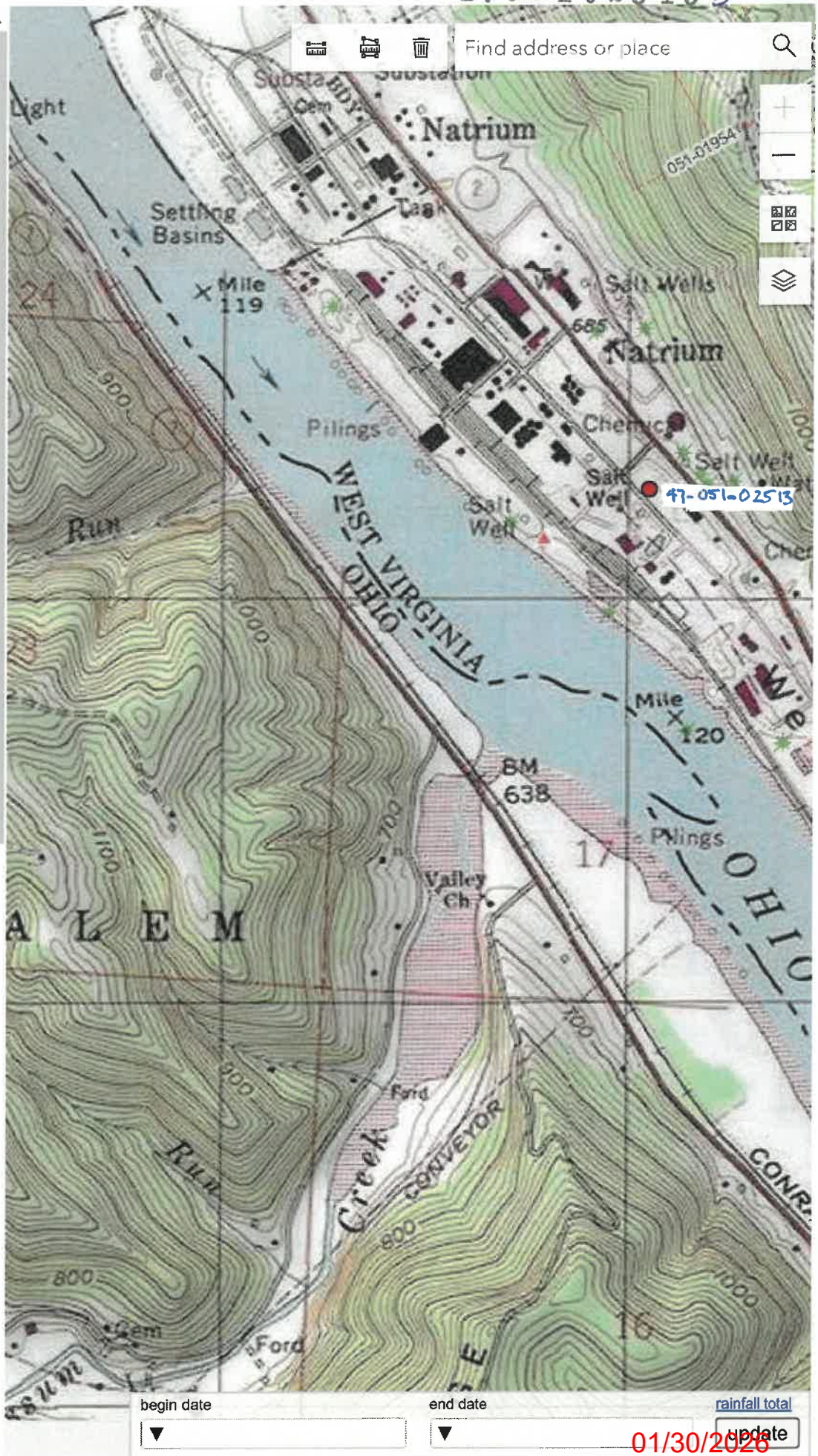
#### WellUse

- Brine Disposal
- Fluid Injection
- Gas Production
- House Gas
- Observation
- Oil Production
- Production
- Solution Mining
- Storage
- Vent
- <all other values>

### Wells, Other than Active Status

#### WellUse

- Brine Disposal
- Fluid Injection
- Gas Production
- House Gas
- Observation
- Oil Production
- Production
- Solution Mining



begin date

end date

rainfall total



update

01/30/2026



4705102513B

# EAGLE NATRIUM, LLC

## 406.636 AC. ±

### WELL NO. BW 101

WELL NO. BW 101  
STATE PLANE COORDINATES  
NORTH ZONE (NAD '83)

N. 456,362.59  
E. 1,589,598.29

LAT=(N) 39.745148  
LONG=(W) 80.847565

UTM (NAD '83)(METERS)  
N. 4,399,483  
E. 513,060

NAD '83 GRID NORTH

RAILROAD TRACKS

WESTLAKE NATRIUM, LLC  
403.636 ACRES ±  
TM 21-25

SCALEGATE ROAD

SKYLINE DRIVE

WELL NO.  
BW 101EXISTING  
PAVED LOT

WESTLAKE NATRIUM, LLC  
98.613 ACRES ±  
TM 21-3.1

#### REFERENCES

UTILITY  
POLETIE LINE  
N 23°06'30" W  
164.65'WELL NO.  
BW 101TIE LINE  
S 23°18'40" W  
100.18'STORM  
INLET

PAVED AREA

SCALE: 1"=200'



12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.5634  
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952  
254 East Beckley Bypass | Beckley, WV 25801 | 304.293.5296

slsvw.com

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APR 15 2024

WV Department of  
Environmental Protection

#### NOTES ON SURVEY

1. TIES TO WELLS, CORNERS AND REFERENCES ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM NORTH ZONE NAD '83.
2. TRACT BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 799 PAGE 387 AND A PREVIOUS SURVEY BY SLS IN 2004 - 2005.
3. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF MARSHALL COUNTY IN SEPTEMBER 2023.
4. WELL STATE PLANE, LAT./LONG. AND UTM (NAD'83) COORDINATES ESTABLISHED BY DGPS(SURVEY GRADE).
5. EAGLE NATRIUM, LLC HAS CHANGED TO WESTLAKE NATRIUM, LLC.

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE MARCH 26, 20 24

REVISED, 20

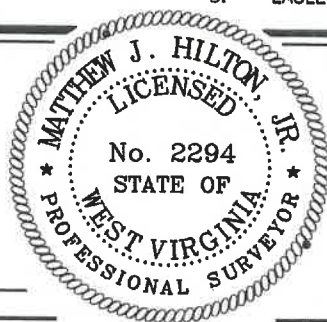
OPERATORS WELL NO. BW 101

API  
WELL NO. 47 - 051 - 02513B  
STATE COUNTY PERMIT

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 REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S.  
2294

*Matthew J. Hilton*



MINIMUM DEGREE  
OF ACCURACY

1 / 2500

FILE NO. 9450-WESTLAKE-BW101-MRH-20230915.DWG

SCALE 1" = 200'

HORIZONTAL &amp; VERTICAL

CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK)

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



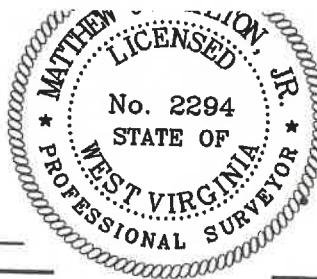
04/30/2026



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P.S.  
2294

*Matth J. Hilton*



(\*) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE MARCH 26, 20 24

REVISED \_\_\_\_\_, 20 \_\_\_\_\_

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OFFICE OF OIL AND GAS



WELL TYPE: OIL \_\_\_\_\_ GAS \_\_\_\_\_ BRINE & LIQUID INJECTION X WASTE DISPOSAL \_\_\_\_\_ IF "GAS" PRODUCTION \_\_\_\_\_ STORAGE \_\_\_\_\_ DEEP X SHALLOW \_\_\_\_\_

LOCATION: GROUND

ELEVATION 648'

WATERSHED OHIO RIVER

DISTRICT FRANKLIN

COUNTY MARSHALL

QUADRANGLE NEW MARTINSVILLE 7.5'

SURFACE OWNER EAGLE NATRIUM, LLC

ACREAGE 456.62± (TOTAL) 403.636 ± (NET)

ROYALTY OWNER EAGLE NATRIUM, LLC

ACREAGE \_\_\_\_\_

LEASE NO. \_\_\_\_\_

PROPOSED WORK:

DRILL X CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR STIMULATE \_\_\_\_\_ PLUG OFF OLD FORMATION \_\_\_\_\_ PERFORATE NEW FORMATION \_\_\_\_\_ PLUG AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUG \_\_\_\_\_ OTHER \_\_\_\_\_

PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

TARGET FORMATION SALINA

ESTIMATED DEPTH 6700' - 6800'

WELL OPERATOR EAGLE NATRIUM, LLC

DESIGNATED AGENT D. SCOTT MILLS

ADDRESS 15696 ENERGY ROAD

ADDRESS 15696 ENERGY ROAD

PROCTOR, WV 26055

PROCTOR, WV 26055

COUNTY NAME

PERMIT

01/30/2026

47051025138

# EAGLE NATRIUM, LLC

## 406.636 AC. ±

### WELL NO. BW 101

WELL NO. BW 101  
STATE PLANE COORDINATES  
NORTH ZONE (NAD '83)

N. 456,362.59  
E. 1,589,598.29

LAT=(N) 39.745148  
LONG=(W) 80.847565

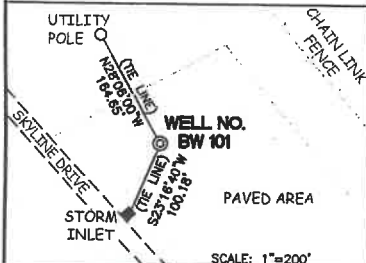
UTM (NAD'83)(METERS)  
N. 4,399,483  
E. 513,080

NOT  
TO  
SCALE

NAD '83 GRID NORTH



#### REFERENCES



12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26035 | 304.463.5534  
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952  
254 East Beckley Bypass | Beckley, WV 25801 | 304.295.8296  
slnwv.com

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 REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S.  
2294

*Matthew J. Hilton*

RECEIVED  
Office of Oil & Gas

APR 15 2024

WV Department of  
Environmental Protection



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DATE MARCH 26, 20 24

REVISED, 20

OPERATORS WELL NO. BW 101

API WELL NO. 47 - 051 - 025138

STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8450-WESTLAKE-SW101-MRH-20220915.DWG  
HORIZONTAL & VERTICAL SCALE 1" = 200'  
CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK)

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



WELL TYPE: OIL GAS BRINE & LIQUID WASTE IF "GAS" PRODUCTION STORAGE DEEP X SHALLOW  
LOCATION: GROUND ELEVATION 648' WATERSHED OHIO RIVER DISTRICT FRANKLIN COUNTY MARSHALL QUADRANGLE NEW MARTINSVILLE 7.5'  
SURFACE OWNER EAGLE NATRIUM, LLC ACREAGE 456.62 ± (TOTAL) 403.636 ± (NET)  
ROYALTY OWNER EAGLE NATRIUM, LLC ACREAGE LEASE NO.  
PROPOSED WORK: DRILL X CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER  
PHYSICAL CHANGE IN WELL (SPECIFY) TARGET FORMATION SALINA ESTIMATED DEPTH 6700' - 6800'

WELL OPERATOR EAGLE NATRIUM, LLC  
ADDRESS 15696 ENERGY ROAD  
PROCTOR, WV 26055

DESIGNATED AGENT D. SCOTT MILLS  
ADDRESS 15696 ENERGY ROAD  
PROCTOR, WV 26055

04/30/2026

COUNTY NAME

PERMIT

NAD '83 LONGITUDE 80°50'00"

1768

NAD '83 LATITUDE 39°45'00"



WESTLAKE NATRIUM, LLC  
98.613 ACRES ±  
TM 21-3.1

EXISTING  
PAVED LOT

WELL NO.  
BW 101

WESTLAKE NATRIUM, LLC  
403.636 ACRES ±  
TM 21-25

EXISTING  
PAVED LOT

3-INCH IRON PIPE FOUND  
2.6' NE OF CORNER

REBAR CORNER NOT FOUND  
SLS CONTROL POINT FOUND  
S 42° 54' E 1177.38'

#### NOTES ON SURVEY

4705102513 B



15696 Energy Road  
Proctor, WV 26055  
Tel 304-451-3797 • Fax 304-455-2422  
dmills1@Westlake.com

April 10, 2024

**Certified Mail Return Receipt Requested**

Mr. Jeffrey W. McLaughlin  
WVDEP / Office of Oil and Gas / Permitting  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304-2345

Dear Mr. McLaughlin:

**Subject: Updated Mylar drawing for Non-Horizontal Operator's Well No. 101,  
API Well Number 47-051-xxx (TBD)**

Please find attached, the updated Mylar drawing reflecting the details as discussed with Westlake staff and project contractors. This drawing should replace the previously submitted plat as part of the well application packet.

If you have any questions, please call Mr. Steve Clark at (304) 451-3881, or myself through the above contact information.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Scott Mills'.

D. Scott Mills, P.E., BCEE  
Manager – Environmental

Enclosure

RECEIVED  
Office of Oil and Gas  
APR 15 2024  
WV Department of  
Environmental Protection

01/30/2026

4705102513B



15606 Energy Road  
Proctor, WV 26055  
Tel 304-451-3797 • Fax 304-455-2422  
dmills1@Westlake.com

December 29, 2023

**Certified Mail Return Receipt Requested**

Mr. James Martin, Chief  
WV Department of Environmental Protection  
Office of Oil and Gas  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304-2345

Dear Mr. Martin:

**Subject: Permit Application for New Non-Horizontal Operator's Well No. 101,  
API Well Number 47-051-xxx (TBD)**

Please find attached, the required completed forms and associated documents for application for a permit to install a new non-horizontal brine well (referenced as Operator Well No. 101). The well will be located at the Westlake Natrium facility (aka Eagle Natrium LLC, Natrium Plant) within the fence line.

Included with the application is a check for the application fee in the amount of \$900,00.

If you have any questions, please call Mr. Steve Clark at (304) 451-3881.

Sincerely,

D. Scott Mills, P.E., BCEE  
Manager – Environmental

Enclosures

RECEIVED  
Office of Oil and Gas

JAN 02 2024

WV Department of  
Environmental Protection

CK# 110512041  
# 900<sup>00</sup>  
12/18/2023

01/30/2026