

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

Monday, July 17, 2023 WELL WORK PERMIT Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC POST OFFICE BOX 12359

SPRING, TX 773914954

Re:

Permit approval for Glenn Didriksen OHI 3H 47-069-00359-00-00

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

Chief

Operator's Well Number: Glenn Didriksen OHI 3H

Farm Name: Didriksen, Glenn

U.S. WELL NUMBER: 47-069-00359-00-00

Horizontal 6A New Drill

Date Issued: 7/17/2023

API Number:	
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4706900359

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) 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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- This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE).
 Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
- 2. 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 § 22-6A-5a (12), 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 one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
- 3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
- 4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
- 5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled Water Well Regulations, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
- 6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
- 7. 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. Also, 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
- 8. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
- 9. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
- 10. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.
- 11. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

API NO. 47-069	<u> </u>
OPERATOR WELL	NO. Glenn Didriksen OHI 3H
Well Pad Name:	Glenn Didriksen

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

1) Well Operator: SWN Produ	ction Co., LLC	494512924	069- Ohio		247- Bethany/648
, <u>-</u>		Operator ID	County	District	Quadrangle
2) Operator's Well Number: Gle	nn Didriksen Ol	HI 3H Well Pa	d Name: Gleni	n Didriksen	<u> </u>
3) Farm Name/Surface Owner:	Glenn Didriksen	Public Ros	ad Access: CR	-33	
4) Elevation, current ground:	1383' El	evation, proposed	post-constructi	ion: 1383'	
5) Well Type (a) Gas X Other	Oil	Und	erground Stora	ge	
(b)If Gas Shal	low X	Deep			
6) Existing Pad: Yes or No Yes		·	_		
7) Proposed Target Formation(s) Target Formation- Marcellus, Up-Dip well to	, Depth(s), Antic the North, Target Top T	ipated Thickness a VD- 6362', Target Base T	and Expected P VD- 6421', Anticipated	ressure(s): Thickness- 59',	Associated Pressure- 4173
8) Proposed Total Vertical Depth	1: 6404'				
9) Formation at Total Vertical D		5			
10) Proposed Total Measured De	epth: 15613'		<u> </u>		
11) Proposed Horizontal Leg Le	ngth: 8695.25'				
12) Approximate Fresh Water St	rata Depths:	283'			
13) Method to Determine Fresh	Water Depths:	Nearby Water We	ell		<u>-</u>
14) Approximate Saltwater Dept	hs: 800' salinity	profile			
15) Approximate Coal Seam Dep	oths: 683'				
16) Approximate Depth to Possi	ble Void (coal m	ine, karst, other):	Possible void	683' Office	BECEN
17) Does Proposed well location directly overlying or adjacent to		ms Yes	No	X JUN Departed portion mental p	ARCEIVED Gas
(a) If Yes, provide Mine Info:	Name:			Wironnonto	
	Depth:				rotection
	Seam:	. <u> </u>			
C " to Carle	Owner:			<u> </u>	

API NO. 474 0 6 9 0 0 3 5 9

OPERATOR WELL NO. Glenn Didriksen OHI 3H
Well Pad Name: Glenn Didriksen

18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20"	New	J-55	94#	136'	136'	CTS
Fresh Water	13 3/8"	New	J-55	54.4#	713'	713'	820 sx/CTS
Coal	See	Surface	Casing	· · · · · ·			
Intermediate	9 5/8"	New	J-55	36#	2071'	2071'	804 sx/CTS
Production	5 1/2"	New	P-110 HP	20#	15613'	15613'	Yell 2621x/ 100' Ireide Sytemediate
Tubing							
Liners	<u> </u>						

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	30"	0.25	2120	81	Class A	1.20/30% Excess
Fresh Water	13 3/8"	17.5"	0.380	2730	633	Class A	1.20/30% Excess
Coal	See	Surface	Casing				
Intermediate	9 5/8"	12 1/4"	0.395	3950	1768	Class A	1.19/40% Excess
Production	5 1/2"	8 3/4"-8 1/2"	0.361	14360	10500	Class A	1.19/5% Excess
Tubing	<u> </u>						
Liners							

JUN 1 4 2023

PACKER	<u> S</u>

WV Department of Environmental Protection

Kind:		
Sizes:		
Depths Set:		

Grand bound

API NO. 47- 469 7 0 6 9 0 0 3 5 9

OPERATOR WELL NO. Glenn Didriksen OHI 3H

Well Pad Name: Glenn Didriksen

19) Describe proposed well work, including	the drilling and	plugging back o	f any pilot ho <u>le:</u>
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Drill and stimulate any potential zones between and including the Benson to Marcellus. **If we should encounter a void place basket above and below void area- balance cement to bottom of void and grout from basket to surface or run external casing packer/cementing stage tool above void interval and perform 2 stage cementing operation dependent upon depth of void. Run casing not less than 20' below void nor more than 75' below void. (*If freshwater is encountered deeper than anticipated it must be protected, set casing 50' below and cts.)

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

Well will be perforated within the target formation and stimulated with a slurry of water, sand, and chemical additives at a high rate. This will be performed in stages with the plug and perf method along the wellbore until the entire lateral has been stimulated within the target formation. All stage plugs are then drilled out and the well is flowed back to surface. In some instances, additional toe prep may be performed by pumping additional water in the toe of the well prior to perforating and pumping Stage 1 to ensure that the toe guns/toe sleeves are fully open prior to pumping stage 1. The well is produced through surface facilities consisting of high pressure production units, horizontal separation units, water and oil storage tanks. Max press and anticipated max rate- 12,500 psi @ 100 barrels a minute.

- 21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 9.01
- 22) Area to be disturbed for well pad only, less access road (acres): 5.79
- 23) Describe centralizer placement for each casing string:

All casing strings will be ran with a centralizer at a minimum of 1 per every 3 joints of casing.

24) Describe all cement additives associated with each cement type:

See Attachment ***

25) Proposed borehole conditioning procedures:

All boreholes will be conditioned with circulation and rotation for a minimum of the bottoms up and continuing until operator is satisfied with borehole conditions.

Office of Oil and Gas

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*Note: Attach additional sheets as needed.

- -		<u> </u>	CEMENT	ADDITIVES		,
INTERVAL	SCHLUMBERGER PRODUCT NAME	BJ PRODUCT NAME	NEXTIER PRODUCT NAME	PRODUCT USE	CHEMICAL NAME	CAS-Number
SURFACE (FRESHWATER)		INTEGRA SEAL	CJ600	LOST CIRC MATERIAL	CELLOPHANE FLAKES	9005-81-6
	S001	A-7P	0110 ACCELERATOR C		CALCIUM CHLORIDE	10043-52-4
COAL	\mathbb{N}	INTEGRA SEAL	0600	LOST CIRC MATERIAL	CELLOPHANE FLAKES	9005-81-6
u 1.3	S001	A-7P	CJIO	ACCELERATOR	CALCIUM CHLORIDE	10043-52-4
	D020	BENTONITE	CJ020	EXTENDER	BENTONITE	1302-78-9
	0047	FP 28L	$>\!\!<$	LIQUID ANTIFOAM AGENT	POLYPROPYLENE GLYCOL	25322-69-4
WITEBUEDIATE	\mathbb{N}	INTEGRA SEAL	CJ600	LOST CIRC MATERIAL	CELLOPHANE FLAKES	9005-81-6
INTERMEDIATE	CemNet	\times	\times	LOST CIRC MATERIAL	COATED FIBERGLASS FIBERS	PROPRIETARY
	SUGAR	SUGAR	CJ795	CMT RETARDER	SUCROSE	57-50-1
	\$001	A-7P	CJ110	ACCELERATOR	CALCIUM CHLORIDE	10043-52-4
	$\overline{}$	$\overline{}$	CJI	ACCELERATOR	SODIUM CHLORIDE	7440-23-5
	> <	55-liW	0880	SURFACTANT	NONIONIC SURFACTANT	6540-99-4
	DO47	FP 28L	$>\!\!<$	LIQUID ANTIFOAM AGENT	POLYPROPYLENE GLYCOL	25322-69-4
	$>\!\!<$	$\overline{}$	OX157011	SOLID ANTIFOAM AGENT	FULLERS EARTH(ATTAPULGITE)	8031-18-3
			CJ540	HP FLUID LOSS ADDITIVE	ALIPHATICAMIDE POLYMER	PROPRIETAR
	0255	>>	>	MED TEMP FLUID LOSS ADDITIVE	POLYACRILIC POLYMER	PROPRIETAR
			CJ213	RETARDER	CHRYSTALLINE SILICA	14808-60-7
PRODUCTION	>>	FL-66	0501	LOW TEMP FLUID	POWDERED POLYSACCHARIDE	PROPRIETAR
		BENTONITE	CJ020	EXTENDER	BENTONITE	1302-78-9
	D208	ASA-301	>	VISCOSI FIER/ANTI- SETTLING AGENT	REFINED POLYMER/ CHRYSTALLINE SILICA	PROPRIETAR
	D198	R-3		CEMENT RETARDER	LIGNIN	8068-51-6
	SUGAR	SUGAR	CJ795	CEMENT RETARDER	SUCROSE	57-50-1
	D065	X	X	DISPERSANT (SOMEWEIVED TROUGH SHADING GAS SULFONATE	8068-51-6
	D800		X	CEMENT RETARDER (Mid-Temperature)	SPININ 4 2023 LIGNOSULFONATE	8061-51-6

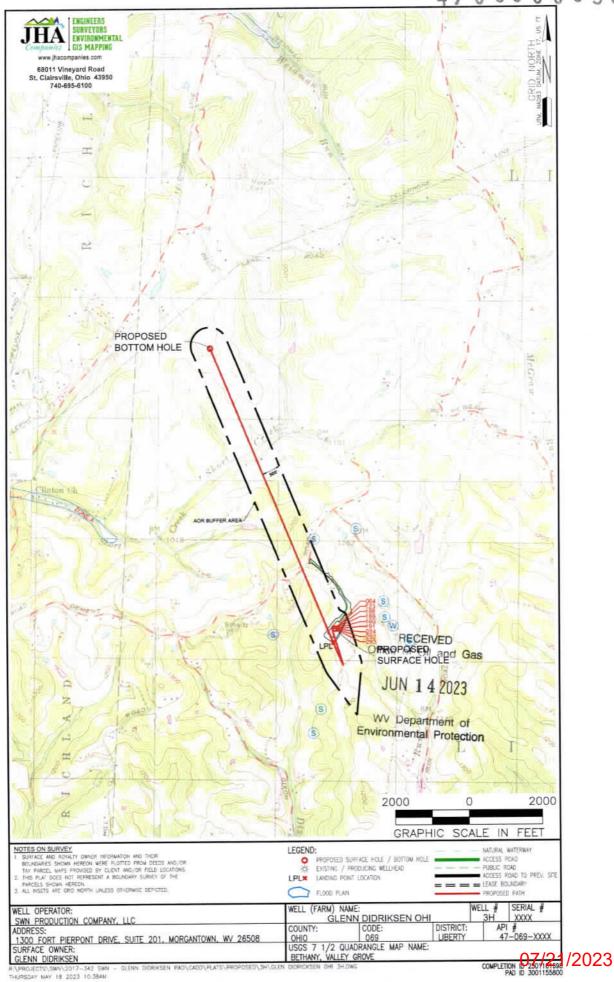
Environmental Protection

Proposed Drilling Program Southwestern Energy Company Re-entry Rig: SDC 40 GLENN DIDRIKSEN OHI 3 Well: Marcellus Shale PANHANDLE FIELD WET Prospect: Field: Southwestern Energy' State: OHIO County: 40.113994 Latitude -80.595167 Longitude SHL (NAD83): -80.607519 Longitude 40.134897 Latitude BHL (NAD83): 1,383 ft MSL GL Elev: **KB Elev:** 1,409 ft MSL KB: 26 ft AGL 136 ' to 733 ' COAL VOID EXPECTED Air/Mist 733 to 2,091 PROD TOC @ 2,071 ' MD Air/Mist **TUBULAR DETAIL** Planned Interval Grade Casing Size Weight **Casing String** (Min) (Min) (in) From 136 2,091 to 5,735 0' Conductor 20 94.0# J-55 Air/Mist 0' 713 Surface/Coal 13.375 54.4# J-55 J-55 0' 2,071 9.625 36.0# Intermediate P-110 HP 15,613 5.5 20.0# Production CEMENT DETAIL Sacks Class Density 19.3 173 Conductor 820 15.6 Surface 804 15.6 Intermediate A 2621 14.5-15.0 Production TD at 5,735 ' Freshwater Depth - 283 'TVD 5,735 to 6,917 KOP at 5,735 'MD 12.0-12.5 ppg Coal Void Depth - 683 'TVD Saltwater Depth - 800 'TVD TVD - 6,404 ' TMD - 15,613 ' TD at 15,613 ' MD 6,404 'TVD 6,404 ' TVD Target Center FOnondaga 6,420 'TVD RECEIVED 6,917 to 15,613 LP at 6,917 'MD 12.5-13.5 ppg SHL Onondaga 6,420 'TVD Office of Oil and Gas Created by: Sebastian Ziaja on 05/26/2023

State 12023

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Environmental Protection



Glenn Didriksen OHI 3H AOR

API	Operator	Status	Latitude	Longitude	Vertical TD	Producing Formation	Producing Zones Not Perforated
47-069-00064	SWN PRODUCTION COMPANY, LLC	ACTIVE	40.114066	-80.595021		MARCELLUS	
47-069-00123	SWN PRODUCTION COMPANY, LLC	ACTIVE	40.114065	-80.595112		MARCELLUS	
47-069-00188	SWN PRODUCTION COMPANY, LLC	ACTIVE	40.113939	~80.595042	6,393'	MARCELLUS	
47-069-00189	SWN PRODUCTION COMPANY, LLC	ACTIVE	40.113971	-80.595015	6,404'	MARCELLUS	
47-069-00190	SWN PRODUCTION COMPANY, LLC	ACTIVE	40.113907	-80.595070	6,425'	MARCELLUS	
47-069-00191	SWN PRODUCTION COMPANY, LLC	ACTIVE	40.114040	-80.594955	6,3951	MARCELLUS	
47-069-00284	SWN PRODUCTION COMPANY, LLC	ACTIVE	40.114001	-80.595075	6,427 ¹	MARCELLUS	
47-069-00292	SWN PRODUCTION COMPANY, LLC	ACTIVE	40.113969	-80.595103	6,527'	MARCELLUS	
47-069-00293	SWN PRODUCTION COMPANY, LLC	ACTIVE	40.113936	-80.595131	6,561'	MARCELLUS	

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WV Department of Environmental Protection WW-9 (4/16)

API Number 47 -	069	-
Operator's	s Well	No. Glenn Didriksen OHI 3H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name SWN Production Co., LLC OP Code 494512924
Watershed (HUC 10) Upper Ohio South Quadrangle Bethany/Valley Grove
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
■ Underground Injection (UIC Permit Number_Various Approved Facilities)
Reuse (at API Number_At the next anticpiated well Off Site Disposal (Supply form WW-9 for disposal location)
Other (Explain recovery and solidification on site
Will closed loop system be used? If so, describe: Yes- See Attachment 3A
Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Air drill to KOP, fluid drill with SOBM from KOP to TD
-If oil based, what type? Synthetic, petroleum, etc. Synthetic Oil Base
Additives to be used in drilling medium? Attachment 3B
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)
-Landfill or offsite name/permit number? Meadowfill SWF- 1032, Short Creek SWF-1034, Carbon Limestone MSWL018781, Wetzel County 1021
Apex Sanitary Landtill Ub-U8438, Brooke Co SWF-TUT3, FMS 3531UU Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any
West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose
where it was properly disposed.
I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued
on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and or other applicable
law or regulation can lead to enforcement action
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for
obtaining the information I believe that the information is true, accurate, and complete. I am aware that there are significant
penalties for submitting false information, including the possibility of fine or imprisonment. WV Department WV Department Protection
Company Official Signature Willton Woody
Company Official (Typed Name) Brittany Woody
Company Official Title Staff Regulatory Specialist
Subscribed and sworn before me this
Notary Public JUSTIN BOOTH
Notary Public Official Seal State of West Virginia
My commission expires

Operator's Well No. Glenn Didriksen OHI 3H

roposed Revegetation T	reatment: Acres Disturbe	d_9.01	Prevegetation ph	<u> </u>
	pH test min.2 Tons/acre or to c			
Fertilizer type _				
Fertilizer amour	t_600/500	lbs/acre		
{Mulch} Hay/S	traw	Tons/acre		
		Seed Mixtures		
	Temporary		Perma	nent
Seed Type Attachment 3C	lbs/acre		Seed Type	lbs/acre
· 				
	<u> </u>		·	
rovided). If water from creage, of the land appli	, pit and proposed area for the pit will be land applied cation area. wolved 7.5' topographic s	d, include dimensions (I	s engineered plans inclue. x W x D) of the pit, and	ding this info have been dimensions (L x W), a
(aps(s) of road, location rovided). If water from creage, of the land appli hotocopied section of ir	the pit will be land applied cation area.	d, include dimensions (I	s engineered plans inclu. x W x D) of the pit, and	dimensions (L x W), a
(aps(s) of road, location rovided). If water from creage, of the land appli	the pit will be land applied cation area.	d, include dimensions (I	.x W x D) of the pit, and	dimensions (L x W), a
(aps(s) of road, location rovided). If water from creage, of the land application of including the complex section of the comp	the pit will be land applied cation area.	d, include dimensions (I	x W x D) of the pit, and	dimensions (L x W), a
(aps(s) of road, location rovided). If water from creage, of the land application of including the complex section of the comp	the pit will be land applied cation area.	d, include dimensions (I	.x W x D) of the pit, and	dimensions (L x W), a
laps(s) of road, location rovided). If water from creage, of the land application of including the complex section of including the land approved by:	the pit will be land applied cation area.	d, include dimensions (I	x W x D) of the pit, and	ED
laps(s) of road, location rovided). If water from creage, of the land application of including the complex section of including the land approved by:	the pit will be land applied cation area.	d, include dimensions (I	RECEIV	ED Gas 2023
laps(s) of road, location rovided). If water from creage, of the land application of including the complex section of including the land approved by:	the pit will be land applied cation area.	d, include dimensions (I	RECEIV Office of the	ED Gas 2023
laps(s) of road, location rovided). If water from creage, of the land application of including the complex section of including the land approved by:	the pit will be land applied cation area. Evolved 7.5' topographic s	t, include dimensions (I	RECEIV Office of the	ED Gas 2023

Attachment 3A

CLOSED LOOP SYSTEM

The closed loop system is designed to eliminate the use of reserve pits by providing a higher level of solids control processing and using steel pits for capture of drill cuttings. The cuttings are then processed to achieve landfill requirements before hauling to approved landfills. The liquids are processed to recycle into the active mud system or to transfer to onsite temporary storage as needed.

The closed loop system consists of a Shale Gas Separator, several banks of solids shakers, high speed centrifuges (1 or 2) used to process the fluid portion of the mud system to remove low gravity solids, low speed centrifuge used for barite recovery in highly weighted liquid drilling systems, a dewatering system (for air intervals and if freshwater mud systems are in use) used to further clean liquids by flocculation and additional mechanical separation, associated open top tanks for processing liquids and capturing solids for disposal, and transfer pumps to move fluids through the processes. There is an area adjacent to the cuttings tanks (Red Zone) where a track hole is utilized to recover the processed cuttings for loading into containers for haul off to an approved landfill site. (See attached schematic of a generic closed loop system layout)

Below are discussions of the processes used when drilling the air interval or liquids interval.

AIR DRILLING INTERVALS

During air drilling operations, flow from the rig will pass down the flowline to the Shale Gas Separator where gas and liquids/solids are separated. Gas is sent to the flare scrubber tank and is flared at the flare stack. Solids and fluids pass across a shaker system to separate solids from liquids. Solids pass into the cuttings tanks where they are captured for drying and hauloff to an approved landfill site. Liquids fall into a shaker tank and are collected by a centrifugal pump to be processed by the high speed centrifuge to further separate liquids and solids. Solids are then dumped into the cuttings tank for drying and hauloff. Liquids are further processed to remove additional low gravity solids before being reused or transferred to onsite storage.

LIQUIDS DRILLING (FRESHWATER, BRINE, SOBM)

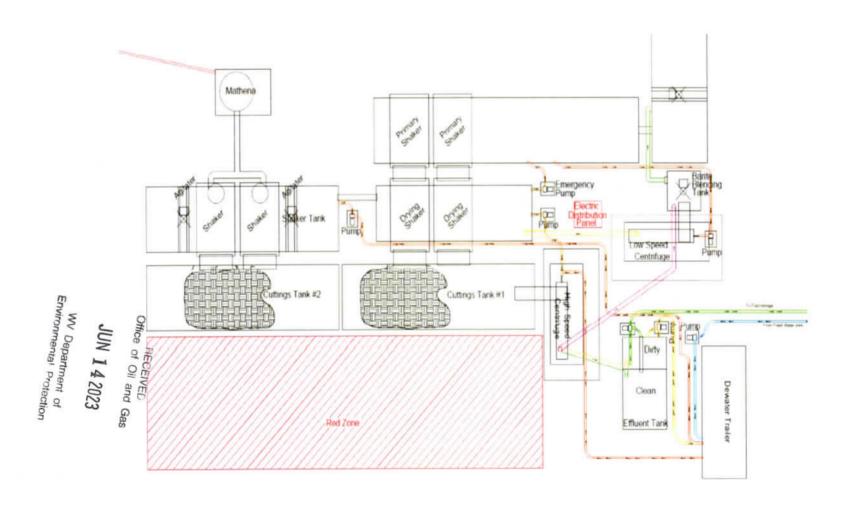
When drilling is converted to liquids drilling, the Shale Gas Separator and associated shaker tank are bypassed, and the liquids system is processed over the primary and drying shaker systems. Cuttings drop into the cuttings tank for additional processing. Any recoverable associated liquids attached to the cutting are recovered out the tank and processed through the low gravity (high speed) and barite recovery centrifuges (low speed) to further remove low gravity solids and to recover barite for reuse in the mud systems.

Office of Oil and Gas

WV Department of Environmental Protection

Solids Control Layout





Attachment 3B

Drilling Mediums

<u>Surface/Coal(if present)/Freshwater Intervals:</u>

Air

Freshwater (if needed based on conditions)

Intermediate/Coal (if present):

Air

Production Hole:

Air

Synthetic Oil (Base Fluid for mud system)

Barite

Calcium Chloride

Lime

Organophilic Bentonite

Primary and Secondary Emulsifiers

Gilsonite

Calcium Carbonate

Friction Reducers

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WVD Seeding Specification



To Order Seed contact Lyndsi Eddy Flippo office 570-996-4271 cell 501-269-5451 lyndsi_eddy@swn.com (please allow 7 to 10 days for delivery)

50lbs per acre of Winter Wheat

NON-ORGANIC PROPERTIES			
Seed Mixture: ROW Mix	SWN Supplied		
Orchardgrass	40%		
Timothy	15%		
Annual Ryegrass	15%		
Brown Top Millet	5%		
Red Top	5%		
Medium Red Clover	5%	All legumes are	
White Clover	5%	innoculated at 5x normal	
Birdsfoot Trefoil	5%	rate	
Rough Bluegrass	5%		
Apply @ 100lbs per acre April 16th- Oct. 14th	Apply @ 200lbs per acre Oct. 15th- April 15th PLUS		

SOIL AMENDMENTS	
10-20-20 Fertilizer	*Apply @ 500lbs per Acre
Pelletized Lime	Apply @ 2 Tons per Acre
	*unless otherwise dictated by soil test results

1452' of 30' ROW/LOD is One Acres 5	ال	Office	
622' of 70' ROW/LOD is One Acres	N 1	RECE of O	
	200		

Every 622 linear feet in a 70' ROW/LOD, you should be using (2) 50lb bags of seed, (4) 50lb bags of fertilizer and (80) 50lb bags of Lime (2x seed in winter months + 50lb Winter Wheat/ac).

Special Considerations:

Landowner Special Considerations including CREP program participants require additional guidance that is not given here. Discuss these requirements with SWN supervision at the beginning of the project to allow time for special seed delivery.

ORGANIC PROPERTIES				
Seed Mixture: SWN Production Organic Mix SWN Supplied				
Organic Timothy	50%	8		
Organic Red or White Clover	50%			
OR				
Organic Perennial Ryegrass	50%			
Organic Red or White Clover	50%			
Apply @ 100lbs per acre		Apply @ 200lbs per acre		
April 16th- Oct. 14th		Oct. 15th- April 15th		
Organic Fertilizer @ 200lbs per Acre		Pelletized Lime @ 2 Tons per Acre		

Seed Mixture: We	tland Mi	x		SWN St	pplied	
VA Wild Ryegrass				20%		
Annual Ryegrass				20%		
Fowl Bluegrass				20%		
Cosmos 'Sensation'				10%		
Redtop			_	5%		
Golden Tickseed	E _		Office	5%		5
Maryland Senna	viror	E	6 B	5%		7
Showy Tickseed	Der	Z	AECE of (5%		0
Fox Sedge	WV Department Environmental Prot	1	RECEIVED of Oil and	2.5%		0
Soft Rush		20	and VED	2.5%		9
Woolgrass	nent of Protection	JUN 1 4 2023	Sas	2.5%		0
Swamp Verbena	tion		¢n	2.5%		0
	@ 25lbs per				Apply @ 50lbs per acre	3
April	16th- Oct. 1	4th			Oct. 15th- April 15th	OI
	NO FER	TILIZER	OR LIME I	NSIDE WETL	AND LIMITS	9

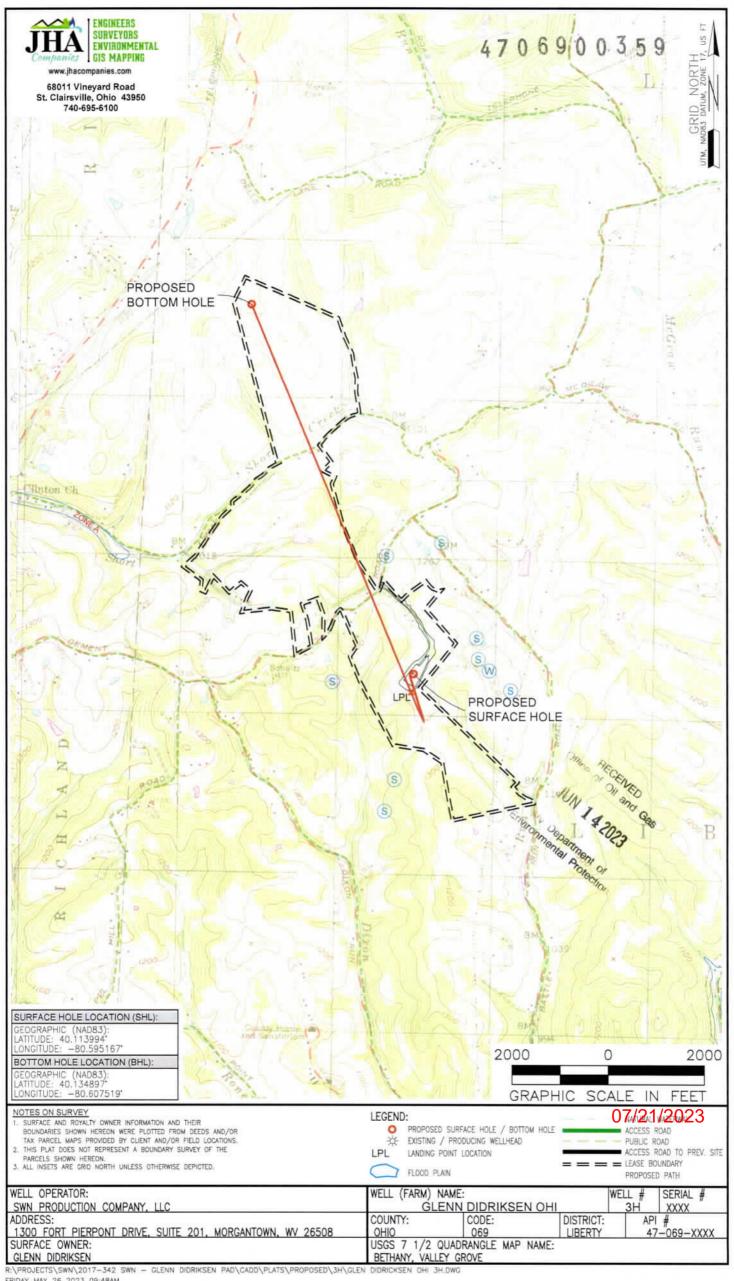
MARCELLUS WELL DRILLING PROCEDURES AND WELL SITE SAFETY PLAN 4706900359

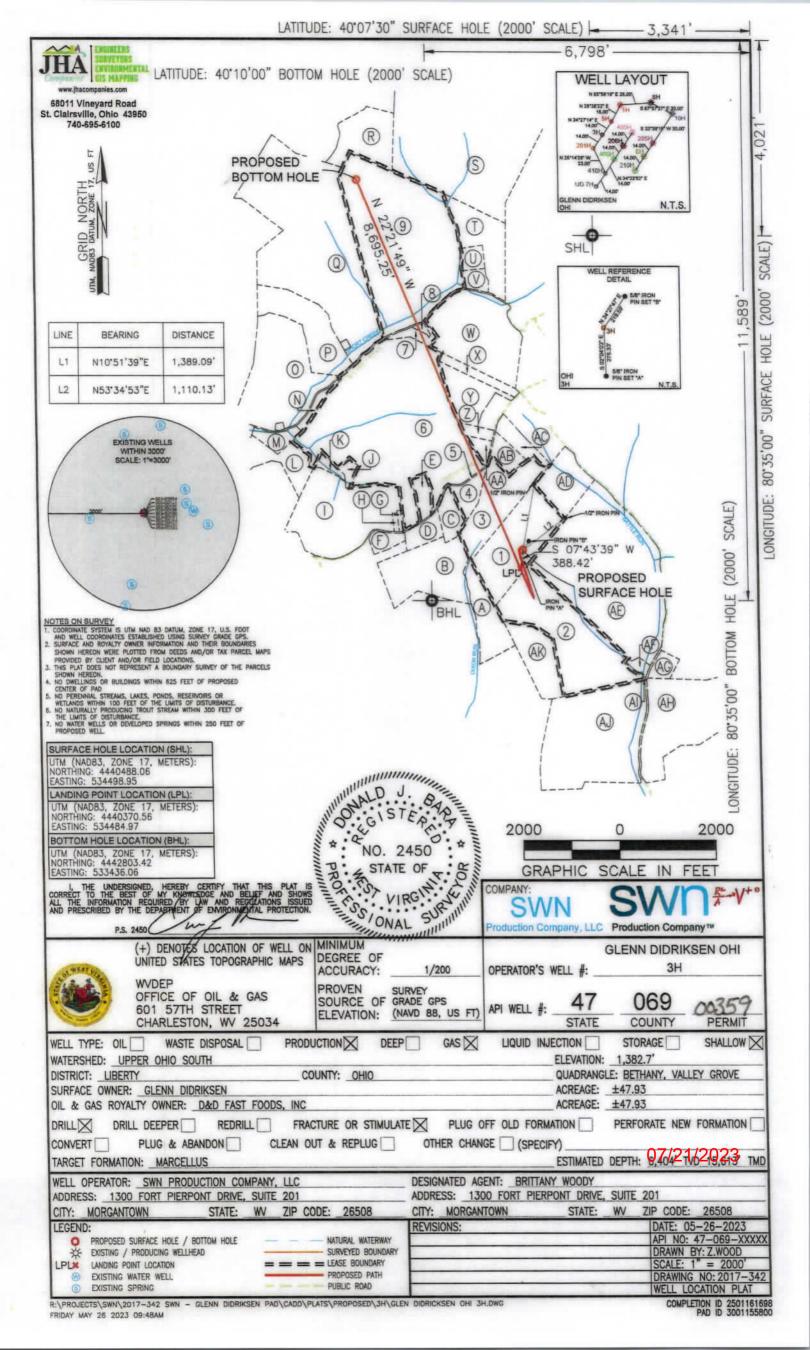


SWN Production Company, LLC 1300 Fort Pierpont Drive, Suite 201 Morgantown, West Virginia 26508

API NO. 47-XXX-XXXXX WELL NAME: Glenn Didriksen OHI 3H Bethany, Valley Grove QUAD Liberty DISTRICT OHIO COUNTY, WEST VIRGINIA

Submitted by:	
Name: Brittany Woody Suttany Woody	Date: <u>5/23/2023</u>
Title: Staff Regulatory Specialist	SWN Production Co., LLC
Approved by:	Date: 6 8 2023. RECEIVED
Title: Oild GAS Inspector	JUN 1 4 2023
Approved by:	WV Department of Environmental Protectio
Name:	Date:
Title:	
SWN PRODUCTION COMPANY, LLC -	- CONFIDENTIAL





WELL BORE TABLE FOR SURFACE/ROYALTY OWNERS					
TRACT	TRACT SURFACE OWNER (S) / ROYALTY OWNER (R)				
1	DIDRIKSEN GLENN (S) D & D FAST FOODS, INC (R)	3-L7-42			
TRACT	SURFACE OWNER	TAX PARCEL			
2	STONE LINDA JEAN	3-L10-39			
3	DIDRIKSEN GLENN	3-L7-37			
4	SEKORAL JAMES E	3-L7-35			
5	STATE OF WEST VIRGINIA DIVISION OF HIGHWAYS	ROUTE 37 DEMENT ROAD			
6	WHITAKER REVOCABLE	3-L7-27			
7	JONES JAMES R & JUNE M	3-L7-18			
8	HERCULES ANNE L	3-L7-17.1			
9	CLISER MARY HELEN; TR	3-1.7-2			

ADJOINING OWNERS TABLE			ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL	TRACT	SURFACE OWNER	TAX PARCEL
A	PARSONS MICHAEL R JR & CAHTERINE R	3-L10-35.4	S	BELLE LANE LLC	3-L4-109
В	A IDOL & R YAL TRUH	3-L10-34	Т	GRIMES ROBERT J	3-L7-3
С	DICESARE PASQUALE J	3-L7-34.1	U	BURKHART MARY ELLEN	3-L7-3.2
D	MORRISON RICHARD	3-L7-34	V	GREEN KATHY	3-1.7-3.1
Е	MCCLURE JAMES T	3-L7-33	w	STONE LINDA JEAN	3-17-16
F	CRAIG JEFFREY T & LAUREN R	3-L7-24	x	ROBRECHT CHADD	3-L7-38.8
G	ARMSTRONG RICHARD JR	3-L7-25.1	Y	MAXWELL JASON W	3-L7-38.7
н	COWAN JOHNNY RAY & BARBARA JO	3-L7-25.2	Z	MEYER GAIL & KEITH SR	3-L7-38.9
1	KEREKES JAMES S & PAMELA SUE	3-L7-25	AA	HARKINS JAMES J JR	3-L7-38
j	FREISMUTH ROBERT J	3-L7-27.1	AB	TOMINACK GARY CHARLES	3-L7-39.4
к	WHITAKER REVOCABLE FAMILY TRUST	3-L7-26	AC	TOMINACK RONALD HEYMAN	3-L7-39.2
L	THROCKMORTON SARA R DENT DAVID A	4-R12-45.16	AD	SNYDER STEPHEN P & D K S	3-L7-42.1
М	WHITAKER REVOCABLE FAMILY TRUST	3-L7-27.3	AE	HINERMAN BARBARA JO	3-L10-40
N	WHITAKER REVOCABLE FAMILY TRUST	3-L7-27.2	AF	SCOTT RONALD M & MARGO L	3-L10-40.
0	HALL MICHAEL JAMES (2/3 INT) & DICKERSON CYNTHIA HALL (1/3)	3-L7-21	AG	STEWART STEPHANIE A	3-L10-42
p	HALL MICHAEL JAMES (2/3 INT) & DICKERSON CYNTHIA	3-L7-20	АН	BUTTS C DWAINE & MURRAY LINDA J	3-L10-43
	HALL (1/3)	3-17-20	Al	STONE LINDA JEAN	3-L10-38
Q	HALL MICHAEL JAMES (2/3 INT) & DICKERSON CYNTHIA HALL (1/3)	3-L7-19	AJ	PADDEN J MATTHEW & JUDITH M	3-L10-3
R	EVANS CATHERINE & DAVID	3-L4-13.1	AK	GUTMAN J MILTON AND CAROLYN L	3-L10-39

07/21/2023

REVISIONS:	COMPANY:	SWN Production Company, LLC		SWN A************************************
	OPERATOR'S WELL #:	GLENN DID	RIKSEN OHI H	DATE: 05-26-2023 API NO: 47-069-XXXXX DRAWN BY:Z.WOOD
	DISTRICT: LIBERTY	COUNTY: OHIO	STATE: WV	SCALE: N/A DRAWING NO:2017-342 WELL LOCATION PLAT

WW-6A1 (5/13) Operator's Well No. GLENN DIDRIKSEN OHI 3H

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE Chapter 22, Article 6A, Section 5(a)(5) 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:

Lease Name or				
Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page

See Exhibit A

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

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:	SWN Production Co., LLC	to-1 Makeye
By:		Gavin Nadeau, RPL
Its:		Senior Landman

Page 1 of

			EXHLBIT "A" ean Didriksen OHI 3H o County, West Virginia			
		Attached to and made a part of the State of West Virginia Oi	and Gas Permit Form, WW-6A1, by SWN Production Com	pany, LLC., Operate	ж	
**************************************	TMP	change the state of the state o	Chesspeake Appalachia, L.L.C	ROYALTY	BK/PG	% INTEREST NOT LEASED BY SWN PRODUCTION COMPANY LLC
1)	03-00L7-0042-0000	D & D Fast Foods, Inc.	Chesapeake Appalachia, L.L.C SWN Production Company, LLC	12.50%	791/455 885/248	0.00%
2)	03-0(.10-0039-0000	Robert Walter Lasch and Dours Jean Lasch, husband and wife	Great Lakes Energy Partners, L.I., C Chesapeake Appelachia, L.I., C SWN Production Company, LLC	15.50%	768/793 820/657 884/73	П 00%
31	03-00L7-0037-0000	D & D Fast Foods, Inc.	Chesapeake Appalachin, L.L.C SWN Production Company, LLC	12.50%	791/455 885/248	0.00%
4)	03-00L7-0035-0000	James E. Sekoral, a single man	Chesapenke Appalachia, L.L.C. SWN Production Company, LLC.	12 50%	793/484 885/260	0.00%
51	Route 37 Dement Road	State of West Virginia Department of Transportation, Highway Division	Chesapeake Appatachia, L.L.C. SWN Production Company, LLC	15.00%	860/5 883/766	0.00%
6)	03-00L7-0027-0000	Maria Whitaker, Attorney-in-Fact for Anita M. Whitaker, widow	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	795/667 885/260	0.00%
7)	03-00L7-0018-0000	James R. Jones and June M. Jones, hasband and wife	Chesapeake Appalachia, L.L.C SWN Production Company, LLC	18.00%	819/781 885/596	0.00%
8)	Q3-00L7-0017-0001	Anne L. Hercules, married and dealing in her sole and separate property	Chesapeake Appalachia, L.L.C SWN Production Company, LLC	16.00%	878/167 894/1	0.00%
9)	03-001.7-0002-0000	The Mary Holen Cliser Trust of 2010, by Courtney Blizzard, Successor Trustee	SWN Production Company, LLC	18.00%	1038/527	0.00%

RECEIVED
Office of Oil and Gas

JUN 142023

WV Department of Environmental Protection





SWN Production Company, LLC 1300 Fort Pierpont Dr, Ste 201 Morgantown, WV 26508 Tel: 304 884 1610 Fax: 304 471 2497 www.swn.com

May 23, 2023

Mr. Charles Brewer WV DEP Office of Oil & Gas 601 57th St., SE Charleston, WV 25304

RE: SWN's proposed New Well: Glenn Didriksen OHI 3H in Ohio County, West Virginia, Drilling under G C and P Road and Dement Road.

Dear Mr. Brewer:

SWN Production Company, LLC ("SWN") is applying for a drilling permit for the above referenced well. The State of West Virginia has raised some concern as to SWN's right to drill under G C and P Road and Dement Road. Please be advised that SWN has leased all mineral owners under said route as it relates to the above-referenced well and unit.

Respectfully,

SWN Production Company, LLC

Gavin Nadeau, RPL Senior Landma

Office of Oil and Gas

JUN 142023

WV Department of Environmental Protection

The Right People doing the Right Things, wisely investing the cash flow from our undurluing Assets will preste Value 1.

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE CERTIFICATION

Date of Notic	ce Certification: U 13	AP	I No. 47-	- 069 -	
		Op	erator's	Well No. Glen	n Didriksen OHI 3H
				ame: Glenn D	
Notice has h	oeen given:				
Pursuant to th	e provisions in West Virginia Code tract of land as follows:	§ 22-6A, the Operator has provide	d the requ	iired parties v	with the Notice Forms listed
State:	West Virginia	Doc	otin o	534,498.95	
County:	069- Ohio		sting: rthing:	4,440,488.06	
District:	Liberty	Public Road Access:		CR-33	
Quadrangle:	Bethany/Valley Grove	Generally used farm		Glenn Didriksen	
Watershed:	Upper Ohio South	Generally used failing	name.		
information re of giving the requirements Virginia Code of this article	ed the owners of the surface described and the country to surface owner notice of entry to surface owner notice of entry to surface owner notice of entry to surface owner notice of subsection (b), section sixteen of \$22-6A-11(b), the applicant shall to have been completed by the applicant	ction sixteen of this article; (ii) the rvey pursuant to subsection (a), so this article were waived in write ender proof of and certify to the set.	at the requestion te ting by the ecretary the	uirement was in of this arti ne surface ov hat the notice	deemed satisfied as a resul cle six-a; or (iii) the notice wner; and Pursuant to Wes
	West Virginia Code § 22-6A, the Operator has properly served the require		Notice Cer	rtification	
	CK ALL THAT APPLY	a parties with the following.			OOG OFFICE USE ONLY
☐ 1. NOT	ICE OF SEISMIC ACTIVITY or	■ NOTICE NOT REQUIRED SEISMIC ACTIVITY WAS CO			RECEIVED/ NOT REQUIRED
■ 2. NOT	TCE OF ENTRY FOR PLAT SURV	EY or NO PLAT SURVEY V	WAS CO	NDUCTED	RECEIVED
■ 3. NOT	TICE OF INTENT TO DRILL or	☐ NOTICE NOT REQUIRED NOTICE OF ENTRY FOR PLA WAS CONDUCTED or			RECEIVED/ NOT REQUIRED
		WRITTEN WAIVER BY S (PLEASE ATTACH)	SURFAC	E OWNER	
■ 4. NOT	TCE OF PLANNED OPERATION				RECEIVED
■ 5. PUB	LIC NOTICE				RECEIVED

Required Attachments:

6. NOTICE OF APPLICATION

Office RECEIVED The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II 120 all Advertisement with publication date verification or the associated Affidavit of Publication. The attached, Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia 1206A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

RECEIVED

Certification of Notice is hereby given:

THEREFORE, I Brittany Woody , have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all 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. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator: SWN Production Co., LLC By:

Brittany Woody

Its: Staff Regulatory

Telephone: 304-884-1610

1300 Fort Pierpont Dr., Suite 201

Morgantown, WV 26508

304-884-1690

Facsimile: Email:

Brittany_Woody@swn.com

Subscribed and sworn before me this 4st day of June 2023

Notary Public

My Commission Expires

JUSTIN BOOTH Notary Public Official Seal State of West Virginia Comm. Expires Mar 10, 2027 Scenery Drive Morgantown WV 26505

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as 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 or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

> W Devaning Environmental Projection

WW-6A (9-13) 47069 900359
API NO. 47-069
OPERATOR WELL NO. Glenn Didriksen OHI 3H
Well Pad Name: Glenn Didriksen

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF APPLICATION

Noti	ce Time Requirement: notice shall be provided	no later than the filing date of permit application.
	e of Notice: Date Permit Application ce of:	Filed: U 3
\checkmark	PERMIT FOR ANY CERTIFICAT	E OF APPROVAL FOR THE
	WELL WORK CONSTRUCT	TION OF AN IMPOUNDMENT OR PIT
Deli	very method pursuant to West Virginia Code §	22-6A-10(b)
	PERSONAL ☑ REGISTERED ☐	METHOD OF DELIVERY THAT REQUIRES A
	SERVICE MAIL	RECEIPT OR SIGNATURE CONFIRMATION
sedin the si oil ar descr opera more well impo have provi propo subse recor provi Code	nent control plan required by section seven of this are arrace of the tract on which the well is or is propose and gas leasehold being developed by the proposed with the erosion and sediment control plan submit ator or lessee, in the event the tract of land on which coal seams; (4) The owners of record of the surface work, if the surface tract is to be used for the placen undment or pit as described in section nine of this at a water well, spring or water supply source located to de water for consumption by humans or domestic are used well work activity is to take place. (c)(1) If more than the section (b) of this section hold interests in the lands, the distribution of this article to the contrary, notice to a lien hour arrace.	is a receipt or signature confirmation, copies of the application, the erosion and ricle, and the well plat to each of the following persons: (1) The owners of record of d to be located; (2) The owners of record of the surface tract or tracts overlying the ell work, if the surface tract is to be used for roads or other land disturbance as itted pursuant to subsection (c), section seven of this article; (3) The coal owner, the well proposed to be drilled is located [sic] is known to be underlain by one or tract or tracts overlying the oil and gas leasehold being developed by the proposed nent, construction, enlargement, alteration, repair, removal or abandonment of any riticle; (5) Any surface owner or water purveyor who is known to the applicant to within one thousand five hundred feet of the center of the well pad which is used to mimals; and (6) The operator of any natural gas storage field within which the re than three tenants in common or other co-owners of interests described in the applicant may serve the documents required upon the person described in the to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any older is not notice to a landowner, unless the lien holder is the landowner. W. Va. shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any ster testing as provided in section 15 of this rule.
☑ A	pplication Notice	an Notice ☑ Well Plat Notice is hereby provided to:
	RFACE OWNER(s)	☐ COAL OWNER OR LESSEE
	e: Patricia Baker Didriksen	Name: Alliance Resources GP, LLC
	ress: 200 Didriksen Dr	Address: 184 Schoolhouse Lane
(F)/41-00-01	phia, WV 260596	Valley Grove, WV 26060
Nam		COAL OPERATOR
Addr	ress:	Name:
		Address:
	RFACE OWNER(s) (Road and/or Other Disturba	Address: SURFACE OWNER OF WATER WAS AND/OR WATER PURVEYOR(s) Name: See Attachment 13A
Nam	e:	SURFACE OWNER OF WATER WHOLL TECETURE
Addr	ess:	AND/OR WATER PURVEYOR(s)
		Name: See Attachment 13A
Nam	e:	Address:
Addr	ess:	* /23</td
		OPERATOR OF ANY NATURAL GAS STORAGE FIELD
	RFACE OWNER(s) (Impoundments or Pits)	Name:
Nam	e:	OPERATOR OF ANY NATURAL GAS STORAGE FIELD Name:
Addr	ress:	
		*Please attach additional forms if necessary

GLEN DIDRIKSEN PAD WATER SOURCES ATTACHMENT 13

PARCEL_ID OWNER	ADDRESS	CITY_STATE_ZIP	WATERSOURCES
03 L10004000000000 LASCH ROBT W & DONNA 🗸	2605 BATTLE RUN RD	TRIADELPHIA, WV 26059	. 3



WW-6A (8-13) API NO. 47- 069 OPERATOR WELL NO. Glenn Didriksen OHI 3H
Well Pad Name: Glenn Didriksen

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

This Notice Shall Include:

Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Pursuant to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and or water purveyor that he or she can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided. whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms, and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well-drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, deswithin three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of systrace or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

WW-6A (8-13)

API NO, 47-069 OPERATOR WELL NO. Glenn Didriksen OHI 3H

Well Pad Name; Glenn Didriksen examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such factors, if necessary.

Water Well Testing:

Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well. The operator shall provide an analysis to such surface landowner or water purveyor at their request.

Water Testing Laboratories:

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments. A surface owner and water purveyor has an independent right to sample and analyze any water supply at his or her own expense. The laboratory utilized by the operator shall be approved by the agency as being certified and capable of performing sample analyses in accordance with this section.

Rebuttable Presumption for Contamination or Deprivation of a Fresh Water Source or Supply:

W. Va. Code § 22-6A-18 requires that (b) unless rebutted by one of the defenses established in subsection (c) of this section, in any action for contamination or deprivation of a fresh water source or supply within one thousand five hundred feet of the center of the well pad for horizontal well, there is a rebuttable presumption that the drilling and the oil or gas well or either was the proximate cause of the contamination or deprivation of the fresh water source or supply. (c) In order to rebut the presumption of liability established in subsection (b) of this section, the operator must prove by a preponderance of the evidence one of the following defenses: (1) The pollution existed prior to the drilling or alteration activity as determined by a predrilling or prealteration water well test. (2) The landowner or water purveyor refused to allow the operator access to the property to conduct a predrilling or prealteration water well test. (3) The water supply is not within one thousand five hundred feet of the well. (4) The pollution occurred more than six months after completion of drilling or alteration activities. (5) The pollution occurred as the result of some cause other than the drilling or alteration activity. (d) Any operator electing to preserve its defenses under subdivision (1), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court... (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of any appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

Written Comment:

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the location or construction of the applicant's proposed well work to the Secretary at:

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

Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water. NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

4706900359

WW-6A (8-13) API NO. 47- 069 OPERATOR WELL NO. Glenn Didriksen OHI 3H
Well Pad Name: Glenn Didriksen

Time Limits and Methods for Filing Comments.

The law requires these materials to be served on or before the date the operator files its Application. You have **THIRTY** (30) **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.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article.

Comment Requirements

Your comments must be in writing and 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.

Disclaimer: All comments received will be placed on our web site http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

Permit Denial or Condition

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

- (1) The proposed well work will constitute a hazard to the safety of persons:
- (2) The plan for soil erosion and sediment control is not adequate or effective;
- (3) Damage would occur to publicly owned lands or resources; or
- (4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

WW-6A (8-13) 47069 NO. 47-069

OPERATOR WELL NO. Glenn Didriksen OHI 3H Well Pad Name: Glenn Didriksen

Notice is hereby given by:

Well Operator: SWN Production Co., LLC

Telephone: 304-884-1610 / Email: Brittany_Woody@swn.com Address: 1300 Fort Pierpont Dr., Suite 201

Morgantown, WV 26508

Facsimile: 304-884-1690

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as 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 or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

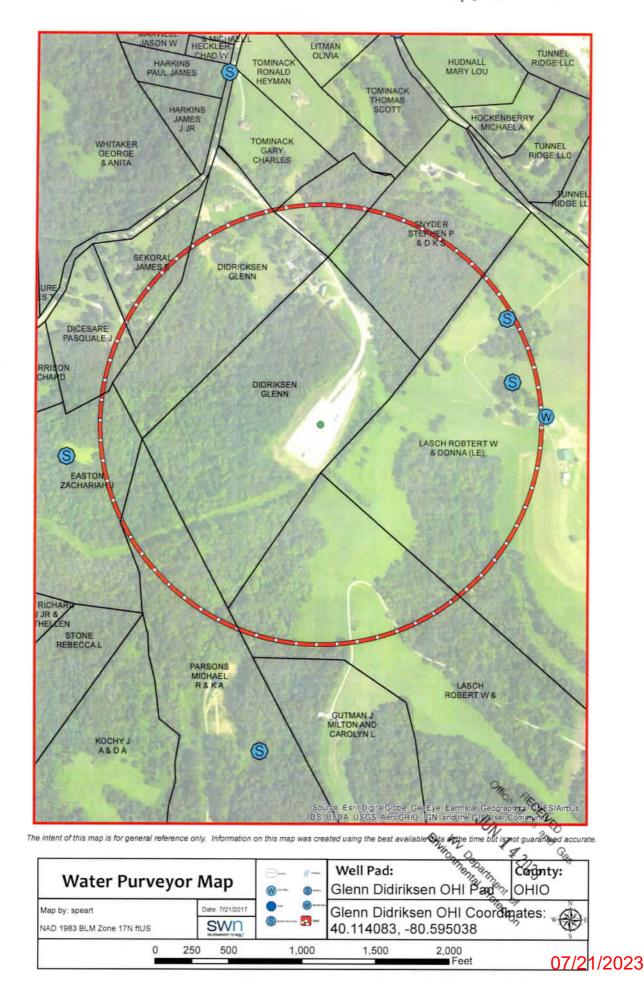
JUSTIN BOOTH
Notary Public Official Seal
State of West Virginia
My Comm. Expires Mar 10, 2027
141 Scenery Drive Morgantown WV 26505

Subscribed and sworn before me this

Notary Public

My Commission Expires

JUN 1 2023
Environmental Production



WW-6A3 (1/12)

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF ENTRY FOR PLAT SURVEY

		Requirement	: Notice shall be prov	rided at least S	EVEN (7) da	ys but no more tha	in FORTY-FIVE (45) days prior to
entry Date		e: 5/18/2023	Date of Pla	nned Entry: _5/	25/2023		
Deliv	ery met	hod pursuant	to West Virginia C	ode § 22-6A-1	0a		
	PERSON	NAL I	REGISTERED	☐ METH	IOD OF DEI	IVERY THAT RI	EQUIRES A
	SERVIC	Е	MAIL			NATURE CONFIR	
on to but no benea owne and S Secre enable	the surface more that such to rof mine dediment stary, who e the sur	nce tract to con nan forty-five of tract that has five rals underlyin Control Manu ich statement s	duct any plat survey days prior to such en- iled a declaration pur- g such tract in the co- al and the statutes are shall include contact obtain copies from the	s required pursi- try to: (1) The si- suant to section ounty tax record d rules related information, in	uant to this a surface owne thirty-six, a ls. The notic to oil and ga	rticle. Such notice r of such tract; (2) rticle six, chapter t e shall include a st s exploration and p	r shall provide notice of planned entry shall be provided at least seven days to any owner or lessee of coal seams twenty-two of this code; and (3) any atement that copies of the state Erosion production may be obtained from the age on the Secretary's web site, to
		E OWNER(s)			■ COA	L OWNER OR LE	SSEE
		Baker Didriksen				ance Resources GP, LLC	
	ess: 200 E			-		184 Schoolhouse Lane	
Triadelp	phia, WV 26	059			Valley Grove,	WV 26060	
Name	e:						
Addre	ess:			_	MINI	ERAL OWNER(s)	
				_		ricia Baker Didriksen	
Name	::					200 Didriksen Dr.	
Addre	ess:			-0	Triadelhpia, W		
	2. 72%			_	-piease attac	h additional forms if no	ecessary
Pursu	ant to W		ode § 22-6A-10(a), r and as follows:	otice is hereby	given that th	e undersigned wel	I operator is planning entry to conduct
State:		West Virginia				ude & Longitude:	39.694557, -80.595000
Coun		Ohio			ublic Road A	Access:	CR-33
Distri		Liberty			Vatershed:	1.0	Upper Ohio South
Quad	rangle:	Valley Grove			jenerally use	d farm name:	Glenn Didriksen
may b Charl obtair	ne obtain eston, W ned from	ed from the Se V 25304 (304 the Secretary reby given by	ecretary, at the WV I 4-926-0450). Copies by visiting <u>www.dep</u> y:	Department of E of such docum	ents or addit	l Protection headq ional information i	sil and gas exploration and production quarters, located at 601 57th Street, SE, related to horizontal drifting may be
	hone:		TION COMPANY, LLC		Addiess.	Morgantown MAZZEE	Suite 201 Mental Mon
i eiep Email		304-884-1610			Facsimile:	Morgantown, WV 2650	Proje of
Linai.	1.	Brittany_Woody	@swn.com		racsimile:	304-004-1090	· Cho

Oil and Gas Privacy Notice:

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WW-6A3 (1/12)

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF ENTRY FOR PLAT SURVEY

	Requirement:	Notice shall be prov	ided at least SE	VEN (7) da	ys but no more that	n FORTY-FIVE (45)	days prior to
entry Date of Notice	e: 5/18/2023	Date of Plan	ned Entry: 5/2	5/2023			
Delivery met	hod pursuant	to West Virginia C	ode § 22-6A-10	a			
☐ PERSON	NAL	REGISTERED	☐ METH	OD OF DEL	LIVERY THAT RE	OUIRES A	
SERVIC	Е	MAIL			NATURE CONFIR		
on to the surfa but no more the beneath such to owner of mine and Sediment Secretary, while enable the sur	ace tract to cond an forty-five d ract that has fil erals underlying Control Manua ch statement sl	duct any plat surveys ays prior to such ent led a declaration pur- g such tract in the co all and the statutes an hall include contact in obtain copies from th	required pursury to: (1) The sisuant to section unty tax records drules related to the reference of the related to the related	ant to this and ant to this and arface owner thirty-six, and the notice of oil and gas	rticle. Such notice s r of such tract; (2) t rticle six, chapter to e shall include a sta s exploration and pa	shall provide notice of shall be provided at least to any owner or lessee wenty-two of this code attement that copies of to roduction may be obtain tige on the Secretary's to	st seven days of coal seams ; and (3) any the state Erosion ined from the
	E OWNER(s)	o:		П сом	L OWNER OR LES	CCEE	
Address:				Address:			
Name:				-			
Address:					ERAL OWNER(s)		
				Name: D&	D Fast Foods, Inc.		
Name:				Address:	200 Didriksen Dr.		
Address.				Triadelhpia, W	V 26059 h additional forms if nec		
Notice is her Pursuant to W		de § 22-6A-10(a), no	otice is hereby g			operator is planning e	ntry to conduct
State:	West Virginia		A	pprox. Latitu	ude & Longitude:	39.694557, -80.595000	
County:	Ohio		D.	iblic Road A		CR-33	
District:	1. Bernarder		11	atershed:		Upper Ohio South	
Quadrangle:				enerally used	d farm name:	Glenn Didriksen	
may be obtained Charleston, Wobtained from	ed from the Sec V 25304 (304- the Secretary b	eretary, at the WV D. 926-0450). Copies by visiting www.dep.	epartment of Er of such docume wv.gov/oil-and	vironmenta nts or additi	l Protection headqui onal information re	Wy Departs	57 th Street, SE, Illing may be /ED and Gas
						Environmental P	rotection

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as 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 or your personal information, please contact DEP's Chief Privacy Officer at deprivacyofficer@wv.gov.

WW-6A4 (1/12) Operator Well No. Glenn Didricksen 3H

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

Notice Time Date of Notic	Requirement: Notice shall be provided a e: 05/31/2023 Date Pe	at least TEN (10) days prior to filing a	permit application.
Delivery met	hod pursuant to West Virginia Code §	22-6A-16(b)	
☐ HAND	■ CERTIFIED MAIL		
DELIVE		OUESTED	
receipt request drilling a hor of this subsect subsection mand if availab	sted or hand delivery, give the surface ov- izontal well: <i>Provided</i> , That notice give tion as of the date the notice was provide ay be waived in writing by the surface ov- ole, facsimile number and electronic mail	owner notice of its intent to enter upon the pursuant to subsection (a), section to the surface owner: <i>Provided</i> , however. The notice, if required, shall included address of the operator and the operator	an operator shall, by certified mail return the surface owner's land for the purpose of en of this article satisfies the requirements wever. That the notice requirements of this lude the name, address, telephone number, or's authorized representative.
	reby provided to the SURFACE O	•	
Name: Patricia		Name:	
Address: 200	ohia, WV 26059	Address.	
State:	wner's land for the purpose of drilling a h	Easting:	534498.95
County:	Ohio	UTM NAD 83 Northing:	4440488.06
District:	Liberty	Public Road Access:	Battle Run Road
Quadrangle:	Bethany, Valley Grove	Generally used farm name:	Glenn Didricksen
Watershed:	Upper Ohio South		
Pursuant to 'facsimile nur related to hor	mber and electronic mail address of the rizontal drilling may be obtained from the	operator and the operator's authorize the Secretary, at the WV Department of	ress, telephone number, and if available, ed representative. Additional information of Environmental Protection headquarters, ep.wv.gov/oil-and-gas/pages/default.aspx.
Notice is he	reby given by:		
Well Operato		Authorized Representative:	Reid Croft
Address:	1300 Fort Pierpoint Drive, Suite 201	Address:	1300 Fort Pierpoint Drive, Suite 201
	Morgantown, WV 26508		Morgantown, WV 26508
Telephone:	304-231-8329	Telephone:	304-231-8329
Email:	reid_croft@swn.com	Email:	reid_croft@swn.com
Facsimile:		Facsimile	
			Office of Oil and Gas

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number; as 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 or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

WW-6A5 (1/12) Operator Well No. Glunn Didricksen 3H

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF PLANNED OPERATION

	tice: 05/31/2023 Date Peri	ded no later than the mit Application Fil		te of permit	application.
Delivery m	ethod pursuant to West Virginia Co	ode § 22-6A-16(c)		•	
■ CERT	TIFIED MAIL	☐ HAND			
	URN RECEIPT REQUESTED	DELIVERY			
the planned required to drilling of a damages to	pt requested or hand delivery, give the l operation. The notice required by be provided by subsection (b), section a horizontal well; and (3) A proposed the surface affected by oil and gas operation.	e surface owner who this subsection sha ten of this article to d surface use and c erations to the exter	ose land wall include: o a surface compensation the dama	(1) A copy cowner whose on agreement ages are com	cation, an operator shall, by certified mail or the drilling of a horizontal well notice of of this code section; (2) The information se land will be used in conjunction with the at containing an offer of compensation for pensable under article six-b of this chapter, sted in the records of the sheriff at the time
(at the addre	ereby provided to the SURFACE OV ess listed in the records of the sheriff a ia Baker Didricksen	at the time of notice): Name:		
Address: 20	0 Didricksen Drive		Address:		
Tria	adelphia, WV 26059				
Pursuant to	on the surface owner's land for the pur WV Ohio Liberty	pose of drilling a hour UTM	NAD 83 Road Ace	vell on the tra Easting: Northing:	well operator has developed a planned ct of land as follows: 534498.95 4440488.06 Battle Run Road Glenn Didricksen
Watershed	Upper Ohio South		any accu		
This Notice Pursuant to to be provided horizontal visurface affe information	e Shall Include: West Virginia Code § 22-6A-16(c), the ded by W. Va. Code § 22-6A-10(b) well; and (3) A proposed surface use a sected by oil and gas operations to the related to horizontal drilling may be solved. Street, SE,	to a surface owner and compensation a extent the damage e obtained from the	r whose la greement of s are comp e Secretary	and will be und containing and pensable und to at the WV	code section; (2) The information required used in conjunction with the drilling of a noffer of compensation for damages to the ler article six-b of this chapter. Additional Department of Environmental Protection or by visiting

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the horizontal saturation of 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 or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

Environmental Protection



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

1900 Kanawha Boulevard East • Building Five • Room 110 Charleston, West Virginia 25305-0430 • (304) 558-3505

t Virginia 25305-0430 * (304) 536-330

Jimmy Wriston, P. E. Secretary of Transportation Commissioner of Highways

May 26, 2023

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

Subject: DOH Permit for the Glen Didriksen Pad, Ohio County Glen Didriksen OHI 3H Well Site

Dear Mr. Martin,

Gregory L. Bailey, P.E.

Interim

State Highway Engineer

This well site will be accessed from a DOH permit #06-2011-0016 which has been issued to Southwestern Energy for access to the State Road for a well site located off Ohio County Route 33 SLS MP 2.13.

This operator is in compliance with §22-6A-20 of the WV Code. Operator has signed a STATEWIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated March 6, 2023. This letter is valid for permitting purposes for one year from the date of this letter.

Very Truly Yours,

Gary K. Clayton, P.E.

Regional Operations Engineer Central Office O&G Coordinator

Dary K. Clayton

Cc: Brittany Woody Southwestern Energy CH, OM, D-6 File

JUN 1 4 2023

JUN 1 4 2023

Environmental Protection

Office of Oil and Gas

Product Name Al-303 (U.S. Well Services)	Product Use	Chemical Name	THE PERSON NAMED IN COLUMN
	Mixture	Ethylene glycol	CAS Number 107-21 1
	-Tillnami &	Cinnamaldehyde	107-21 1
		Butyl cellosolve	111-76 2
		Formic acid	64-18 6
		Polyether	Proprietary
		Acetophenone, thiourea, formaldehyde polymer	68527-49 1
ONE (U.S. Well Services)	Breaker	Ammonium persulfate	7727-54-0
tron K-139 (Champion Technologies)	Biocide	Glutaraldehyde	111-30-8
		Quaternary Ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides	68424-85-1
		Ethanol	64-17-5
tron K-219 (Champion Technologies)	Biocide	Methanol	67-56-1
		Quaternary Ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides	68424-85-1
boNRT	Tracer	Ceramic Proppant	66402-68-4
5486A (Nalco Champion)	Scale Inhibitor	Amine Triphosphate	Proprietary
		Ethylene Glycol	107-21-1
6734A (Champion Technologies)	Biocide	Hydrogen Peroxide	7722-84-1
		Acetic Acid	64-19-7
		Peroxyacetic Acid	79-21-0
no-Cl200 (SWN Well Services)	Corrosion Inhibitor	Methanol	67-56-1
		Oxyalkylated fatty acid	68951-67-7
		Fatty acids	61790-12-3
		Modified thiourea polymer	68527-49-1
		Water	7732-18-5
		Hydrochloric acid	7647-01-0
		Potassium acetate	127-08-2
		Formaldehyde	50-00-0
opol-FEAC (SWN Well Services)	Iron Control	Acetic Acid	64-19-7
A CONTRACTOR OF THE CONTRACTOR		Citric Acid	77-92-9
		Water	7732-18-5
P-S1176-15 (Halliburton)	Friction Reducer	Polyacylate	Proprietary
	A STATE OF THE STA	Hydrotreated light petroleum distillate	64742-47-8
JET DR900 LPP (SWN Well Services)	Friction Reducer	Distillates (petroleum) hydrotreated light	64674-47-8
		Ethylene Glycol	107-21-1
		Alcohols, C12-16, Exoxylated propoxylated	68213-24-1
		Fatty Alcohols ethoxylated	Proprietary
		Water	7732-18-5
JET DRP 1130X (SWN Well Services)	Friction Reducer	Proprietary	Proprietary
76 (Halliburton)	Friction Reducer	Hydrotreated light petroleum distillate	64742-47-8
		Inorganic Salt	Proprietary
TRON T-390 (Champion Technologies)	Scale Inhibitor	Methanol	67-56-1
		Nonylphenol Ethoxylate	Proprietary
-150E (Halliburton)	Corrosion Inhibitor	No hazardous substance	N/A
(SWN Well Services)	Hydrocholic Acid	Hydrochloric Acid	7647-01-0
		Water	7732-18-5
5 MC (Halliburton)	Scale Inhibitor	Organic phosphonate	Proprietary
		Ammonium Chloride	12125-02-9
TO SECURE A SECURITION OF A PERSON OF A PE			
I-FLEX (U.S. Well Services)	Viscosifying Agent	Distillates, petroleum, hydrotreated light	64742-47-8
The state of the s	Viscosifying Agent Friction Reducer	Distillates, petroleum, hydrotreated light Copolymer of 2-propenamide	Proprietary
THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TRANSPORT OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLU		Copolymer of 2-propenamide Hydrotreated Distillate	
THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TRANSPORT OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLU		Copolymer of 2-propenamide	Proprietary
The state of the s		Copolymer of 2-propenamide Hydrotreated Distillate	Proprietary 64742-47-8
The state of the s		Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide	Proprietary 64742-47-8 7647-14-5
The state of the s		Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated	Proprietary 64742-47-8 7647-14-5 68551-12-2
slick 930		Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4
sslick 930	Friction Reducer	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9
sslick 930	Friction Reducer	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chloride Ammonium Chloride Ammonium Chloride	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8
cslick 930	Friction Reducer Friction Reducer	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chloride Ammonium Chloride Ammonium Chloride N,N-bis (2-hydroxyethyl) oleamide	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5
xslick 930 xslick 953	Friction Reducer	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chloride Ammonium Chloride N,N-bis (2-hydroxyethyl) oleamide Petroleum Distillate	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9
exslick 930 exslick 953	Friction Reducer Friction Reducer	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chloride Ammonium Chloride Ammonium Chloride N,N-bis (2-hydroxyethyl) oleamide	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4
xslick 930 xslick 953	Friction Reducer Friction Reducer	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chloride Ammonium Chloride Ammonium Chloride N,N-bis (2-hydroxyethyl) oleamide Petroleum Distillate Ammonium Chloride Oleic Acid Diethanolamide	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4 64742-47-8 12125-02-9 93-83-4
cslick 930	Friction Reducer Friction Reducer	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chloride Ammonium Chloride N,N-bis (2-hydroxyethyl) oleamide Petroleum Distillate Ammonium Chloride N,N-bis (2-hydroxyethyl) oleamide Petroleum Distillate Ammonium Chloride Ammonium Chloride Alcohols, C12-16, Exoxylated	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4 64742-47-8 12125-02-9 93-83-4 68551-12-2
xslick 930 xslick 953 xslick 957	Friction Reducer Friction Reducer Friction Reducer	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chloride Ammonium Chloride N,N-bis (2-hydroxyethyl) oleamide Petroleum Distillate Ammonium Chloride Oleic Acid Diethanolamide Acohols, C12-16, Exoxylated Water	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4 64742-47-8 12125-02-9 93-83-4 68551-12-2 7732-15-5
xslick 930 xslick 953 xslick 957	Friction Reducer Friction Reducer	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chloride Ammonium Chloride N,N-bis (2-hydroxyethyl) oleamide Petroleum Distillate Ammonium Chloride Oleic Acid Diethanolamide Alcohols, C12-16, Exoxylated Water Copolymer of 2-Propeenamide	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4 64742-47-8 12125-02-9 93-83-4 68551-12-2 7732-15-5
xslick 930 xslick 953 xslick 957	Friction Reducer Friction Reducer Friction Reducer	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, Ct2-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chioride Ammonium Chloride Ammonium Chloride Ammonium Chloride Ammonium Chloride Oleic Acid Diethanolamide Ammonium Chloride Ammonium Chloride Oleic Acid Diethanolamide Alcohols, Ct2-16, Exoxylated Water Copolymer of 2-Propeenamide Distillates (petroleum), hydotreated light	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4 64742-47-8 12125-02-9 93-83-4 68551-12-2 7732-15-5
xslick 930 xslick 953 xslick 957	Friction Reducer Friction Reducer Friction Reducer	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chloride Ammonium Chloride Ammonium Chloride N,N-bis (2-hydroxyethyl) oleamide Petroleum Distillate Ammonium Chloride Oleic Acid Diethanolamide Oleic Acid Diethanolamide Alcohols, C12-16, Exoxylated Water Copolymer of 2-Propeenamide Distillates (petroleum), hydotreated light Alcohol Ethoxylate	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4 64742-47-8 12125-02-9 93-83-4 68551-12-2 7732-15-5
exslick 930 exslick 953 exslick 957 exslick V996	Friction Reducer Friction Reducer Friction Reducer no data available	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chloride Ammonium Chloride MNN-bis (2-hydroxyethyl) oleamide Petroleum Distillate Ammonium Chloride NN-bis (2-hydroxyethyl) oleamide Petroleum Distillate Ammonium Chloride Oleic Acid Diethanolamide Alcohols, C12-16, Exoxylated Water Copolymer of 2-Propeenamide Distillates (petroleum), hydotreated light Alcohol Ethoxylate Surfactant	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4 64742-47-8 12125-02-9 93-83-4 64551-12-2 7732-15-5
xslick 930 xslick 953 xslick 957	Friction Reducer Friction Reducer Friction Reducer	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chloride Ammonium Chloride N,N-bis (2-hydroxyethyl) oleamide Petroleum Distillate Ammonium Chloride Oleic Acid Diethanolamide Alcohols, C12-16, Exoxylated Water Copolymer of 2-Propeenamide Distillates (petroleum), hydotreated light Alcohol Ethoxylate Surfactant Hydrotreated light distillate (petroleum)	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4 64742-47-8 12125-02-9 93-83-4 68551-12-2 7732-15-5
cslick 930 cslick 953 cslick 957 cslick V996 RA-2000 (U.S. Well Services)	Friction Reducer Friction Reducer Friction Reducer no data available Anionic Friction Reducer	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, Ct2-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chioride Ammonium Chloride Ammonium Chloride Ammonium Chloride Ammonium Chloride Ammonium Chloride Oleic Acid Diethanolamide Alcohols, Ct2-16, Exoxylated Water Copolymer of 2-Propeenamide Distillates (petroleum), hydotreated light Alcohol Ethoxylate Surfactant Hydrotreated light distillate (petroleum) Propenoic acid, polymer with propenamide	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4 64742-47-8 12125-02-9 93-83-4 68551-12-2 7732-15-5 64742-47-8 9003-06 9
uslick 953 uslick 957 uslick V996 RA-2000 (U.S. Well Services)	Friction Reducer Friction Reducer Friction Reducer no data available Anionic Friction Reducer Scale Inhibitor	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chloride Ammonium Chloride Ammonium Chloride Ammonium Chloride N,N-bis (2-hydroxyethyl) oleamide Petroleum Distillate Ammonium Chloride Oleic Acid Diethanolamide Alcohols, C12-16, Exoxylated Water Copolymer of 2-Propeenamide Distillates (petroleum), hydotreated light Alcohol Ethoxylate Surfactant Hydrotreated light distillate (petroleum) Propenoic acid, polymer with propenamide Diethylenetriamine penta (methylene phosphonic acid)	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4 64742-47-8 12125-02-9 93-83-4 68551-12-2 7732-15-5 64742-47-8 9003-06 9 15827-30-8
kslick 930 kslick 953 kslick 957 kslick V996 RA-2000 (U.S. Well Services)	Friction Reducer Friction Reducer Friction Reducer no data available Anionic Friction Reducer	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chloride Ammonium Chloride Ammonium Chloride M,N-bis (2-hydroxyethyl) oleamide Petroleum Distillate Ammonium Chloride Diet Acid Diethanolamide Alcohols, C12-16, Exoxylated Water Copolymer of 2-Propeenamide Distillates (petroleum), hydotreated light Alcohol Ethoxylate Surfactant Hydrotreated light distillate (petroleum) Propenoic acid, polymer with propenamide Diethylenetriamine penta (methylene phosphonic acid) Copolymer of 2-propenaminde	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4 64742-47-8 12125-02-9 93-83-4 64742-47-8 64742-47-8 64742-47-8 9003-06 9 15827-30-8 69418-26-4
sslick 930 sslick 953 sslick 957 sslick V996 RA-2000 (U.S. Well Services)	Friction Reducer Friction Reducer Friction Reducer no data available Anionic Friction Reducer Scale Inhibitor	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chloride Ammonium Chloride Ammonium Chloride N,N-bis (2-hydroxyethyl) oleamide Petroleum Distillate Ammonium Chloride Oleic Acid Diethanolamide Alcohols, C12-16, Exoxylated Water Copolymer of 2-Propeenamide Distillates (petroleum), hydotreated light Alcohol Ethoxylate Surfactant Hydrotreated light distillate (petroleum) Propenoic acid, polymer with propenamide Diethylenetriamine penta (methylene phosphonic acid) Copolymer of 2-propenaminde Distillates (petroleum), hydotreated light	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4 64742-47-8 12125-02-9 93-83-4 64742-47-8 12125-02-9 13827-30-8 64742-47-8 9003-06 9 15827-30-8 69418-26-4 64742-47-8
sslick 930 sslick 953 sslick 957 sslick V996 RA-2000 (U.S. Well Services)	Friction Reducer Friction Reducer Friction Reducer no data available Anionic Friction Reducer Scale Inhibitor	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, Ct2-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chioride Ammonium Chloride Ammonium Chloride Ammonium Chloride Ammonium Chloride Ammonium Chloride Ammonium Chloride Oleic Acid Diethanolamide Alcohols, Ct2-16, Exoxylated Water Copolymer of 2-Propeenamide Distillates (petroleum), hydotreated light Alcohol Ethoxylate Surfactant Hydrotreated light distillate (petroleum) Propenoic acid, polymer with propenamide Diethylenetriamine penta (methylene phosphonic acid) Copolymer of 2-propenaminde Distillates (petroleum), hydotreated light Ammonium Chloride ((NH4)CI)	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4 64742-47-8 12125-02-9 93-83-4 68551-12-2 7732-15-5
slick 930 slick 953 slick 957 slick V996 RA-2000 (U.S. Well Services) aid 655 NM slick 922	Friction Reducer Friction Reducer Friction Reducer no data available Anionic Friction Reducer Scale Inhibitor no data available	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chloride Ammonium Chloride Ammonium Chloride N,N-bis (2-hydroxyethyl) oleamide Petroleum Distillate Ammonium Chloride Oleic Acid Diethanolamide Alcohols, C12-16, Exoxylated Water Copolymer of 2-Propenamide Distillates (petroleum), hydotreated light Alcohol Ethoxylate Surfactant Hydrotreated light distillate (petroleum) Propenoic acid, polymer with propenamide Diethylenetriamine penta (methylene phosphonic acid) Copolymer of 2-propenaminde Diethylenetriamine penta (methylenethyl	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4 64742-47-8 12125-02-9 93-83-4 68551-12-2 7732-15-5 64742-47-8 9003-06 9 15827-30-8 69418-26-4 64742-47-8 12125-02-9 93-83-4
slick 930 slick 953 slick 957 slick V996 tA-2000 (U.S. Well Services) aid 655 NM slick 922	Friction Reducer Friction Reducer Friction Reducer no data available Anionic Friction Reducer Scale Inhibitor no data available Mixture	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chloride Ammonium Chloride Ammonium Chloride N.N-bis (2-hydroxyethyl) oleamide Petroleum Distillate Ammonium Chloride Oleic Acid Diethanolamide Oleic Acid Diethanolamide Alcohols, C12-16, Exoxylated Water Copolymer of 2-Propenamide Distillates (petroleum), hydotreated light Alcohol Ethoxylate Surfactant Hydrotreated light distillate (petroleum) Propenoic acid, polymer with propenamide Diethylenetriamine penta (methylene phosphonic acid) Copolymer of 2-propenaminde Distillates (petroleum), hydotreated light Ammonium chloride ((NH4)CI) Oleic Acid Diethnolamide Phosphonium, tetrakis (hydroxymethyl), Sulfate	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4 64742-47-8 12125-02-9 93-83-4 68551-12-2 7732-15-5 64742-47-8 9003-06 9 15827-30-8 69418-26-4 64742-47-8 12125-02-9 93-83-4 55566-30-8
slick 930 slick 953 slick 957 slick V996 RA-2000 (U.S. Well Services) aid 655 NM slick 922	Friction Reducer Friction Reducer Friction Reducer no data available Anionic Friction Reducer Scale Inhibitor no data available Mixture	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chloride Ammonium Chloride Ammonium Chloride N.N-bis (2-hydroxyethyl) oleamide Petroleum Distillate Ammonium Chloride Oleic Acid Diethanolamide Oleic Acid Diethanolamide Alcohols, C12-16, Exoxylated Water Copolymer of 2-Propenamide Distillates (petroleum), hydotreated light Alcohol Ethoxylate Surfactant Hydrotreated light distillate (petroleum) Propenoic acid, polymer with propenamide Diethylenetriamine penta (methylene phosphonic acid) Copolymer of 2-propenaminde Distillates (petroleum), hydotreated light Ammonium chloride ((NH4)CI) Oleic Acid Diethnolamide Phosphonium, tetrakis (hydroxymethyl), Sulfate	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4 64742-47-8 12125-02-9 93-83-4 68551-12-2 7732-15-5 64742-47-8 9003-06 9 15827-30-8 69418-26-4 64742-47-8 12125-02-9 93-83-4 55566-30-8
cslick 930 cslick 953 cslick 957 cslick V996 RA-2000 (U.S. Well Services) caid 655 NM cslick 922	Friction Reducer Friction Reducer Friction Reducer no data available Anionic Friction Reducer Scale Inhibitor no data available Mixture	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chloride Ammonium Chloride Ammonium Chloride N.N-bis (2-hydroxyethyl) oleamide Petroleum Distillate Ammonium Chloride Oleic Acid Diethanolamide Oleic Acid Diethanolamide Alcohols, C12-16, Exoxylated Water Copolymer of 2-Propenamide Distillates (petroleum), hydotreated light Alcohol Ethoxylate Surfactant Hydrotreated light distillate (petroleum) Propenoic acid, polymer with propenamide Diethylenetriamine penta (methylene phosphonic acid) Copolymer of 2-propenaminde Distillates (petroleum), hydotreated light Ammonium chloride ((NH4)CI) Oleic Acid Diethnolamide Phosphonium, tetrakis (hydroxymethyl), Sulfate	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4 64742-47-8 12125-02-9 93-83-4 64551-12-2 7732-15-5 64742-47-8 9003-06 9 15827-30-8 69418-26-4 64742-47-8 12125-02-9 93-83-4 55566-30-8
cslick 930 cslick 953 cslick 957 cslick V996 RA-2000 (U.S. Well Services) caid 655 NM cslick 922	Friction Reducer Friction Reducer Friction Reducer no data available Anionic Friction Reducer Scale Inhibitor no data available Mixture	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chloride Ammonium Chloride Ammonium Chloride N.N-bis (2-hydroxyethyl) oleamide Petroleum Distillate Ammonium Chloride Oleic Acid Diethanolamide Oleic Acid Diethanolamide Alcohols, C12-16, Exoxylated Water Copolymer of 2-Propenamide Distillates (petroleum), hydotreated light Alcohol Ethoxylate Surfactant Hydrotreated light distillate (petroleum) Propenoic acid, polymer with propenamide Diethylenetriamine penta (methylene phosphonic acid) Copolymer of 2-propenaminde Distillates (petroleum), hydotreated light Ammonium chloride ((NH4)CI) Oleic Acid Diethnolamide Phosphonium, tetrakis (hydroxymethyl), Sulfate	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4 64742-47-8 12125-02-9 93-83-4 68551-12-2 7732-15-5 64742-47-8 9003-06 9 15827-30-8 69418-26-4 64742-47-8 12125-02-9 93-83-4 55566-30-8
xslick 930 xslick 953 xslick 957 xslick V996 RA-2000 (U.S. Well Services) xaid 655 NM xslick 922 cide 4Frac	Friction Reducer Friction Reducer Friction Reducer no data available Anionic Friction Reducer Scale Inhibitor no data available Mixture	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chloride Ammonium Chloride Ammonium Chloride N.N-bis (2-hydroxyethyl) oleamide Petroleum Distillate Ammonium Chloride Oleic Acid Diethanolamide Oleic Acid Diethanolamide Alcohols, C12-16, Exoxylated Water Copolymer of 2-Propenamide Distillates (petroleum), hydotreated light Alcohol Ethoxylate Surfactant Hydrotreated light distillate (petroleum) Propenoic acid, polymer with propenamide Diethylenetriamine penta (methylene phosphonic acid) Copolymer of 2-propenaminde Distillates (petroleum), hydotreated light Ammonium chloride ((NH4)CI) Oleic Acid Diethnolamide Phosphonium, tetrakis (hydroxymethyl), Sulfate	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4 64742-47-8 12125-02-9 93-83-4 68551-12-2 7732-15-5 64742-47-8 64742-47-8 12125-02-9 15827-30-8 69418-26-4 64742-47-8 12125-02-9 93-83-4 55566-30-8
xslick 930 xslick 953 xslick 957 xslick V996 RA-2000 (U.S. Well Services) xaid 655 NM xslick 922 cide 4Frac	Friction Reducer Friction Reducer Friction Reducer no data available Anionic Friction Reducer Scale Inhibitor no data available Mixture	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chloride Ammonium Chloride Ammonium Chloride N.N-bis (2-hydroxyethyl) oleamide Petroleum Distillate Ammonium Chloride Oleic Acid Diethanolamide Oleic Acid Diethanolamide Alcohols, C12-16, Exoxylated Water Copolymer of 2-Propenamide Distillates (petroleum), hydotreated light Alcohol Ethoxylate Surfactant Hydrotreated light distillate (petroleum) Propenoic acid, polymer with propenamide Diethylenetriamine penta (methylene phosphonic acid) Copolymer of 2-propenaminde Distillates (petroleum), hydotreated light Ammonium chloride ((NH4)CI) Oleic Acid Diethnolamide Phosphonium, tetrakis (hydroxymethyl), Sulfate	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4 64742-47-8 12125-02-9 93-83-4 68551-12-2 7732-15-5 64742-47-8 9003-06 9 15827-30-8 69418-26-4 64742-47-8 12125-02-9 93-83-4 55566-30-8
xslick 930 xslick 953 xslick 957 xslick V996 RA-2000 (U.S. Well Services) xaid 655 NM xslick 922 cide 4Frac	Friction Reducer Friction Reducer Friction Reducer no data available Anionic Friction Reducer Scale Inhibitor no data available Mixture	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chloride Ammonium Chloride Ammonium Chloride N.N-bis (2-hydroxyethyl) oleamide Petroleum Distillate Ammonium Chloride Oleic Acid Diethanolamide Oleic Acid Diethanolamide Alcohols, C12-16, Exoxylated Water Copolymer of 2-Propenamide Distillates (petroleum), hydotreated light Alcohol Ethoxylate Surfactant Hydrotreated light distillate (petroleum) Propenoic acid, polymer with propenamide Diethylenetriamine penta (methylene phosphonic acid) Copolymer of 2-propenaminde Distillates (petroleum), hydotreated light Ammonium chloride ((NH4)CI) Oleic Acid Diethnolamide Phosphonium, tetrakis (hydroxymethyl), Sulfate	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4 64742-47-8 12125-02-9 93-83-4 64551-12-2 7732-15-5 64742-47-8 9003-06 9 15827-30-8 69418-26-4 64742-47-8 12125-02-9 93-83-4 55566-30-8
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xslick 930 xslick 953 xslick 957 xslick V996 RA-2000 (U.S. Well Services) xaid 655 NM xslick 922 cide 4Frac	Friction Reducer Friction Reducer Friction Reducer no data available Anionic Friction Reducer Scale Inhibitor no data available Mixture	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, Ct2-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chioride Ammonium Chloride Ammonium Chloride Ammonium Chloride Ammonium Chloride Ammonium Chloride Ammonium Chloride Oleic Acid Diethanolamide Alcohols, Ct2-16, Exoxylated Water Copolymer of 2-Propeenamide Distillates (petroleum), hydotreated light Alcohol Ethoxylate Surfactant Hydrotreated light distillate (petroleum) Propenoic acid, polymer with propenamide Distillates (petroleum), hydotreated light Ammonium chloride ((NH4)CI) Oleic Acid Diethnolamide Distillates (petroleum), hydotreated light Ammonium chloride ((NH4)CI) Oleic Acid Diethnolamide Ethanol Tetrakis (hydroxymethyl), Sulfate Quaternary ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides Ethanol Tetrakis (hydroxymethyl) phosphonium sulphate Acrylic acid terpolymer containing carboxylate phosphonate and working acid propus	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4 64742-47-8 12125-02-9 93-83-4 68551-12-2 7732-15-5 64742-47-8 9003-06 9 15827-30-8 69418-26-4 64742-47-8 12125-02-9 93-83-4 12125-02-9 93-83-4 12125-02-9 93-83-4 12125-02-9 15827-30-8 12125-02-9 15827-30-8 12125-02-9 15827-30-8 12125-02-9 15827-30-8 12125-02-9 125366-30-8 125366-30-8 125366-30-8
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xslick 930 xslick 953 xslick 957 xslick V996 RA-2000 (U.S. Well Services) xaid 655 NM xslick 922 lcide 4Frac lcide PS50A	Friction Reducer Friction Reducer Friction Reducer no data available Anionic Friction Reducer Scale Inhibitor no data available Mixture Biocidal product Friction Reducer Scale Control Specialty Product Iron Control	Copolymer of 2-propenamide Hydrotreated Distillate Sodium Chloride Alcohols, C12-16, Exoxylated Oleic Acid Diethanolamide Ammonium Chloride Petroleum Distillate Sodium Chioride Ammonium Chloride Ammonium Chloride Ammonium Chloride Ammonium Chloride Ammonium Chloride Ammonium Chloride Oleic Acid Diethanolamide Alcohols, C12-16, Exoxylated Water Copolymer of 2-Propeenamide Distillates (petroleum), hydotreated light Alcohol Ethoxylate Surfactant Hydrotreated light distillate (petroleum) Propenoic acid, polymer with propenamide Diethylenetriamine penta (methylene phosphonic acid) Copolymer of 2-propenaminde Distillates (petroleum), hydotreated light Ammonium chloride ((NH4)CI) Oleic Acid Diethnolamide Phosphonium, tetrakis (hydroxymethyl), Sulfate Quaternary ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides Ethanol Tetrakis (hydroxymethyl) phosphonium sulphate Acrylic acid terpolymer containing carboxylate phosphonate and womate groups Hydrotreated light petroleum distillate Ethoxylated alcohol Poly (oxy-1.2-ethanediyl) alphatridecylomegahydroxy-, branched Methanol Phosphonic Acid Salt Sodium erythorbate	Proprietary 64742-47-8 7647-14-5 68551-12-2 93-83-4 12125-02-9 64742-47-8 7647-14-5 12125-02-9 93-83-4 64742-47-8 12125-02-9 93-83-4 68551-12-2 7732-15-5 64742-47-8 9003-06 9 15827-30-8 69418-26-4 64742-47-8 12125-02-9 93-83-4 55566-30-8 68424-85-1 64-17-5 64-17

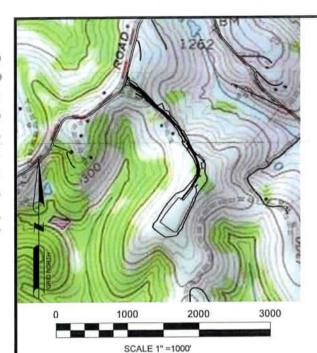
OPERATOR: SWN Production Co., LLC	WELL NO: Glenn Didriksen OHI 3H
PAD NAME: Glenn Didriksen	
REVIEWED BY:	_ SIGNATURE: BULLONLY MOODLY
	0 0
WELL RESTRICTION	ONS CHECKLIST
HORIZONTA	L 6A WELL
Well Restrictions	* Pad Built Pallolto
At Least 100 Feet from Pad and LOD (Perennial Stream, Lake, Pond, Reservo	including any E&S Control Feature) to any ir or Wetland; OR
DEP Waiver and Permit Condition	ons
At Least 300 Feet from Pad and LOD (Naturally Producing Trout Stream; OR	including any E&S Control Feature) to any
DEP Waiver and Permit Condition	ons
At Least 1000 Feet from Pad and LOD Groundwater Intake or Public Water Su	(including any E&S Control Feature) to any apply; OR
DEP Waiver and Permit Condit	ions
At Least 250 Feet from an Existing Wa Drilled; OR	ter Well or Developed Spring to Well Being
Surface Owner Waiver and Rec	orded with County Clerk, OR
DEP Variance and Permit Cond	itions
At Least 625 Feet from an Occupied De	welling Structure to Center of the Pad; OR
Surface Owner Waiver and Rec	orded with County Clerk, OR
DEP Variance and Permit Cond	litions

At Least 625 Feet from Agricultural Buildings Larger than 2500 Square Feet to the Center of the Pad; OR

Surface Owner Waiver and Recorded with County Clerk, 98 142023

DEP Variance and Permit Conditions

WV Department of Environmental projection





GLENN DIDRIKSEN PAD CONSTRUCTION AS-BUILT LIBERTY DISTRICT, OHIO COUNTY, WV MAY 2017

COORDINATES: SITE ENTRANCE (NAD 83)

LAT: 40.119029 LONG: -80.597673

AT DIDRIKSEN PAD (NAD 83)

LAT: 40.114523 LONG: -80.594813

CENTER OF PAD (NAD 83)

LAT: 40.114097 LONG: -80.595004

GATHERING AREA (NAD 83) LAT: 40.119078

LONG: -80.597596

EXISTING WELLS:

DIDRIKSEN 1H 47-069-00123 (NAD 83) LAT: 40.114065 LONG: -80.595112

DIDRIKSEN 6H 47-069-00188 (NAD 83)

LAT: 40.113938 LONG: -80.595043

DIDRIKSEN 8H 47-069-00064 (NAD 83)

LAT: 40.114066 LONG: -80.595021

DIDRIKSEN 10H 47-069-00191 (NAD 83) LAT: 40.114040

LONG: -80.594955

DIDRIKSEN 205H 47-069-00189 (NAD 83)

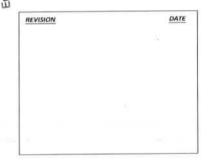
LAT: 40.113971 LONG: -80.595016

DIDRIKSEN 210H 47-069-00190 (NAD 83)

LAT: 40.113907 LONG: -80.595071

JUN 14 2023

C-001 **COVER SHEET** C-101 **EVACUATION ROUTE / PREVAILING WINDS EVACUATION ROUTE / PREVAILING WINDS** C-102 C-201 AS-BUILT / CONSTRUCTION OVERVIEW AS-BUILT / CONSTRUCTION PLAN C-301 AS-BUILT / CONSTRUCTION PLAN C-302 AS-BUILT / CONSTRUCTION PLAN C-303 CONSTRUCTION AS-BUILT ACCESS ROAD PROFILE C-401 RECLAMATION PLAN OVERVIEW R-501 RECLAMATION PLAN R-601 R-602 RECLAMATION PLAN R-603 RECLAMATION PLAN R-604 RECLAMATION DETAILS RECLAMATION DETAILS R-605 RECLAMATION DETAILS R-606



SHEET INDEX

	QUANTI	TIES TABLE		
PREDRILLING	QTY./SIZE	RECLAMATION	QTY./SIZE	
ROAD OVER BERM	48 CY of #57 STONE DISCHARGE AREAS		AASHTO #3 = 18 CY	
CATCH BASINS	2 EA.	RIPRAP	RIPRAP D50 6" = 40 CY	
4" PVC DRAIN PIPES	111 LF	BREACH AREAS	3 EA.	
4" STEEL GATE VALVE	2 EA.	WELL CELLARS - 60" CMP	6 EA.	
ANTI-SEEP COLLARS	4 EA.			
OUTLET PROTECTION	AASHTO #3 = 1.25 CY			
	RIPRAP D50 6" = 3.75 CY			

LOD	
DESCRIPTION	ACRES
ROAD DISTURBED AREA	3.22
PAD DISTURBED AREA	5.79
TOTAL	9.01





2017-342 Didriksen As-Built Plans.dwg

Production Company, LLC



GLENN DIDRIKSEN COVER SHEET C-001

LIBERTY DISTRICT, OHIO COUNTY, WV.

05-17-17

JHA SHIVE TORS ENGINEERS ENVIRONMENTAL

6/8/2023

