

BEFORE THE INDUSTRIAL COMMISSION  
OF THE STATE OF NORTH DAKOTA

CASE NO. 26122  
ORDER NO. 28535

IN THE MATTER OF A HEARING CALLED ON  
A MOTION OF THE COMMISSION TO  
CONSIDER THE APPLICATION OF  
WINDRIDGE OPERATING LLC PURSUANT TO  
NDAC § 43-02-03-88.1 FOR AN ORDER  
AUTHORIZING THE DRILLING OF A  
SALTWATER DISPOSAL WELL TO BE  
LOCATED IN LOT 2 OF SECTION 1, T.163N.,  
R.93W., SHORT CREEK FIELD, BURKE  
COUNTY, ND, IN THE DAKOTA GROUP  
PURSUANT TO NDAC CHAPTER 43-02-05 AND  
SUCH OTHER RELIEF AS IS APPROPRIATE.

ORDER OF THE COMMISSION

THE COMMISSION FINDS:

- (1) This cause came on for hearing at 9:00 a.m. on the 21st day of September, 2017.
- (2) Pursuant to North Dakota Administrative Code (NDAC) Section 43-02-03-88.1, the Director is authorized to sign, on behalf of the Commission, orders relating to, inter alia, underground injection under NDAC Chapter 43-02-05.
- (3) Windridge Operating, LLC (Windridge) proposes to dispose of saltwater produced with crude oil and other defined Class II wastes by injection into the Dakota Group through the Glaspey SWD #1 well to be located in Lot 2 of Section 1, Township 163 North, Range 93 West, Burke County, North Dakota, Short Creek Field. This is a well to be drilled.
- (4) Windridge submitted an Application for Injection and attachments pursuant to NDAC Section 43-02-03-88.1 and NDAC Section 43-02-05-04.
- (5) No one appeared in person to support or object to the application and no written comments or objections to the application were received prior to the hearing date.
- (6) The Dakota Group in this area contains in excess of 10,000 parts per million of total dissolved solids or is an exempted aquifer.
- (7) The proposed injection well is sited in such a fashion that it will inject into a formation which has confining zones that are free of known open faults or fractures within the area of review.

(8) The proposed injection well will be constructed in such a manner as to prevent the movement of fluids into or between underground sources of drinking water.

(9) In order to prevent possible damage to surface lands, and contamination of surface and subsurface waters, this application should be approved.

IT IS THEREFORE ORDERED:

(1) Windridge Operating, LLC, its assigns and successors, is hereby permitted to dispose of Class II fluids, pursuant to NDAC Chapter 43-02-05, by injection into the Dakota Group through the Glaspey SWD #1 well, to be located in Lot 2 of Section 1, Township 163 North, Range 93 West, Burke County, North Dakota, Short Creek Field.

(2) The permission granted herein is conditioned on the operator receiving and complying with all provisions of the injection permit issued by the Oil and Gas Division of the Industrial Commission pursuant to NDAC Section 43-02-05-04 and with all other provisions of NDAC Chapter 43-02-05.

(3) This order shall remain in full force and effect until further order of the Commission.

Dated this 19th day of October, 2017.

INDUSTRIAL COMMISSION  
STATE OF NORTH DAKOTA

By the Director, on behalf of the Commission

/s/ Lynn D. Helms, Director

SFN 5729

STATE OF NORTH DAKOTA

AFFIDAVIT OF MAILING

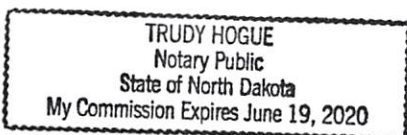
COUNTY OF BURLEIGH

I, Jeanette Bean, being duly sworn upon oath, depose and say: That on the 23rd day of October, 2017 enclosed in separate envelopes true and correct copies of the attached Order No. 28535 of the North Dakota Industrial Commission, and deposited the same with the United States Postal Service in Bismarck, North Dakota, with postage thereon fully paid, directed to the following persons by the Industrial Commission in Case No. 26122:

LAWRENCE BENDER  
FREDRIKSON & BYRON  
PO BOX 1855  
BISMARCK ND 58502-1855

  
Jeanette Bean  
Oil & Gas Division

On this 23rd day of October, 2017 before me personally appeared Jeanette Bean to me known as the person described in and who executed the foregoing instrument and acknowledged that she executed the same as her free act and deed.



  
Notary Public  
State of North Dakota, County of Burleigh

**APPLICATION FOR INJECTION - FORM 14**

INDUSTRIAL COMMISSION OF NORTH DAKOTA  
OIL AND GAS DIVISION  
600 EAST BOULEVARD DEPT 405  
BISMARCK, ND 58505-0840  
SFN 18669 (08-2012)

C. 26/22

**RECEIVED**

AUG 15 2017

**ND Oil & Gas Div.**

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM. PLEASE SUBMIT THE ORIGINAL AND TWO COPIES.  
APPROVAL MUST BE OBTAINED BEFORE WORK COMMENCES.

Permit Type <input type="checkbox"/> Enhanced Recovery <input checked="" type="checkbox"/> Saltwater Disposal <input type="checkbox"/> Gas Storage	Injection Well Type <input type="checkbox"/> Converted <input checked="" type="checkbox"/> Newly Drilled	Commercial SWD <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Operator <b>WINDRIDGE OPERATING LLC</b>	Telephone Number <b>(830) 331-7422</b>	Will Oil be Skimmed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Address <b>518 N MAIN STREET</b>	City <b>BOERNE</b>	State <b>TX</b>
Well Name and Number <b>GLASPEY SWD 1</b>	Field or Unit <b>SHORT CREEK</b>	Zip Code <b>78006</b>

**LOCATIONS**

At Surface <b>310 F N L</b>	<b>2000 F E L</b>	Qtr-Qtr <b>LOT 2</b>	Section <b>1</b>	Township <b>163 N</b>	Range <b>93 W</b>	County <b>BURKE</b>
Bottom Hole Location <b>310 F N L</b>	<b>2000 F E L</b>	Qtr-Qtr <b>LOT 2</b>	Section <b>1</b>	Township <b>163 N</b>	Range <b>93 W</b>	County <b>BURKE</b>
Geologic Name of Injection Zone <b>DAKOTA GROUP</b>	Top <b>3930</b>	Feet	Injection Interval <b>4015-4305</b>	Feet		
Geologic Name of Top Confining Zone <b>MOWRY FORMATION</b>	Thickness <b>320</b>	Feet	Geologic Name of Bottom Confining Zone <b>SWIFT FORMATION</b>	Thickness <b>320</b>	Feet	
Bottom Hole Fracture Pressure of the Top Confining Zone <b>3,144</b>	PSI		Gradient <b>0.80</b>	PSI/Ft		
Estimated Average Injection Rate and Pressure <b>6,000 BPD @ 600</b>	PSI		Estimated Maximum Injection Rate and Pressure <b>11,500 BPD @ 1,075</b>	PSI		
Geologic Name of Lowest Known Fresh Water Zone <b>FOX HILLS</b>	Depth to Base of Fresh Water Zone <b>1,125 1145</b>			Feet		
Total Depth of Well (MD & TVD) <b>4,500</b>	Feet					
Logs Previously Run on Well <b>NA</b>						

**CASING, TUBING, AND PACKER DATA (Check ☐ If Existing)**

NAME OF STRING	SIZE	WEIGHT (Lbs/Ft)	SETTING DEPTH	SACKS OF CEMENT	TOP OF CEMENT	TOP DETERMINED BY
Surface <input type="checkbox"/>	<b>9 5/8</b>	<b>36</b>	<b>1,350</b>	<b>610</b>	<b>0</b>	<b>VISUAL</b>
Intermediate <input type="checkbox"/>						
Long String <input type="checkbox"/>	<b>7</b>	<b>26</b>	<b>4,500</b>	<b>250</b>	<b>2,800</b>	<b>CBL</b>

Liner <input type="checkbox"/>	TOP	BOTTOM	SACKS OF CEMENT

Proposed Tubing	SIZE	WEIGHT (Lbs/Ft)	SETTING DEPTH	TYPE
	<b>4 1/2</b>	<b>12.75</b>	<b>3,990</b>	<b>J55 INTERNALLY PLASTIC COATED</b>

Proposed Packer Setting Depth <b>3,985</b>	Feet	Model <b>ARROWSET 1-X</b>	<input type="checkbox"/> Compression <input type="checkbox"/> Permanent <input checked="" type="checkbox"/> Tension
---	------	------------------------------	--


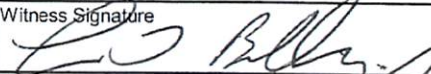
**FOR STATE USE ONLY**

Permit Number and Well File Number	
UIC Number	Approval Date
By	
Title	



## COMMENTS

Depth to base of FW is calculated from resources available—drilling oversight will be required to ensure that surface casing is set at least 50' into the Pierre Shale. Cement volumes are estimates for ideal conditions—actual cement volumes will be adjusted accordingly by operator/cement contractor to compensate for deviations in drilling plan, wellbore, cement type, formation influences, etc. and achieve the required isolation under existing regulations for both surface and production strings. Injection Interval is also estimated—actual Injection Interval will be determined from logs run on well during completion.

I hereby swear or affirm that the information provided is true, complete and correct as determined from all available records.		Date <u>8/14/2017</u>
Signature 	Printed Name <b>MATTHEW BILLINGSLEY</b>	Title <b>VP EXPLORATION</b>
Above Signature Witnessed By		
Witness Signature 	Witness Printed Name <b>Lee T Billingsley</b>	Witness Title <b>President</b>

### Instructions

1. Attach a list identifying all attachments.
2. The operator, well name and number, field or unit, well location, and any other pertinent data shall coincide with the official records on file with the Commission. If it does not, an explanation shall be given.
3. If an injection well is to be drilled, an Application for Permit to Drill - Form 1 (SFN 4615) shall also be completed and accompanied by a plat prepared by a registered surveyor and a drilling fee.
4. Attach a lithologic description of the proposed injection zone and the top and bottom confining zones.
5. Attach a plat depicting the area of review (1/4-mile radius) and detailing the location, well name, and operator of all wells in the area of review. Include: injection wells, producing wells, plugged wells, abandoned wells, drilling wells, dry holes, and water wells. The plat shall also depict faults, if known or suspected.
6. Attach a description of the needed corrective action on wells penetrating the injection zone in the area of review.
7. Attach a brief description of the proposed injection program.
8. Attach a quantitative analysis from a state-certified laboratory of fresh water from the two nearest fresh water wells. Include legal descriptions.
9. Attach a quantitative analysis from a state-certified laboratory of a representative sample of water to be injected.
10. Attach a list identifying all source wells, including location.
11. Attach a legal description of land ownership within the area of review. List ownership by tract or submit in plat form.
12. Attach an affidavit of mailing certifying that all landowners within the area of review have been notified of the proposed injection well. This notice shall inform the landowners that comments or objections may be submitted to the Commission within 30 days, or that a hearing will be held at which comments or objections may be submitted, whichever is applicable. Include copies of letters sent.
13. Attach all available logging and test data on the well which has not been previously submitted.
14. Attach schematic drawings of the injection system including current well bore construction and proposed well bore and surface facility construction.
15. Attach a Sundry Notice - Form 4 (SFN 5749) detailing the proposed procedure.
16. Attach a diagram representing the traffic flow and the maximum number of trucks staged on site.
17. Attach a printout of a map obtained at <http://www.nd.gov/gis/apps/HubExplorer/> with surficial aquifers (under hydrography) active, and proposed location plotted on printout.
18. Read Section 43-02-05-04 of the North Dakota Administrative Code to ensure that this application is complete.
19. The original and two copies of this application and attachments shall be filed with the Industrial Commission of North Dakota, Oil and Gas Division, 600 East Boulevard, Dept. 405, Bismarck, ND 58505-0840.

### List of Attachments

- Application (4 pages)
- List of Attachments
- **Form 14—Application for Injection (2 pages)**
- Operator Description
- Proposed Well Location
- Lithologic Description of the Proposed Injection and Confining Zones
- Maximum Injection Pressure Calculation
- Estimated Injection Rates
- Depth to Base of Fresh Water Zone
- Injection Plan
- Sources of Injected Fluid
- Corrective Action on Wells in ¼-Mile Area of Review
- Surface Owner Addresses in Area of Review
- Containment Calculations
- Logging and Test Data
- Map of ¼-Mile Area of Review
- Map and Discussion of Surficial Aquifers and Wellhead Protection Areas
- Freshwater Investigation
- Affidavit of Investigation
- Soil Discussion
- Analyses of the Water from the Nearest Freshwater Well
- Analysis of Representative Sample of Injection Fluid
- Land Ownership Description
- Affidavit of Mailing and Copy of Notices Sent (5 pages)
- Schematic of Proposed Wellbore Construction
- Schematic of Wellhead Construction
- Schematic of Surface Construction, Tanks, Containment and Traffic Flow
- Schematic of Tank Capacity and Purpose
- **Form 4—Sundry Notice Detailing Proposed Completion Procedure**
- Approach Permit for Facility (2 pages)
- **Form 1—Application for Permit to Drill**
- Drilling Prognosis
- Accurate Plat Certified by Registered Surveyor
- Section Breakdown
- Cut & Fill Grading Plan (Pad Layout)
- Site Facilities
- Site Quantities
- Access Approach
- County Road Map

### **Operator Description**

Windridge Operating LLC  
518 N Main Street  
Boerne, TX 78006  
Phone: 830-331-7422

### **Proposed Well Location**

Well Name: GLASPEY SWD 1  
Location: 310 FNL, 2,000 FEL Lot 2 of Section 1-163N-93W  
County: Burke County, ND  
Field: Short Creek Field  
Ground Elevation: 1,945.4'  
Finish Pad Elevation: +/- 1,944.5' (estimated)  
KB: +/- 1,960' (estimated)

### **Lithologic Description of the Proposed Injection & Confining Zone**

#### **Injection Zone:** Inyan Kara Formation

Estimated Gross Zone: 3,930'-4,315'

Estimated Perforated Interval: 4,015'-4,305'

Description: Sandstone, white to very light gray, angular, medium to coarse grained with silty inter-beds, good inter-granular porosity and very good permeability. ~385' thick.

#### **Upper Confining Zone:** Mowry Formation

Estimated Top: 3,610'

Description: Shale, medium to dark gray, soft to medium firm, flakey to splintery, trace of bentonitic clay, no effective porosity or permeability. ~320' thick.

#### **Lower Confining Zone:** Swift Formation

Estimated Top: 4,315'

Description: Shale, gray-green, fissile to splintery, dull to sub waxy texture, calcareous, with local limey and sandy units, no effective porosity or permeability. ~320' thick.

Lithology Reference: North Dakota Stratigraphic Column

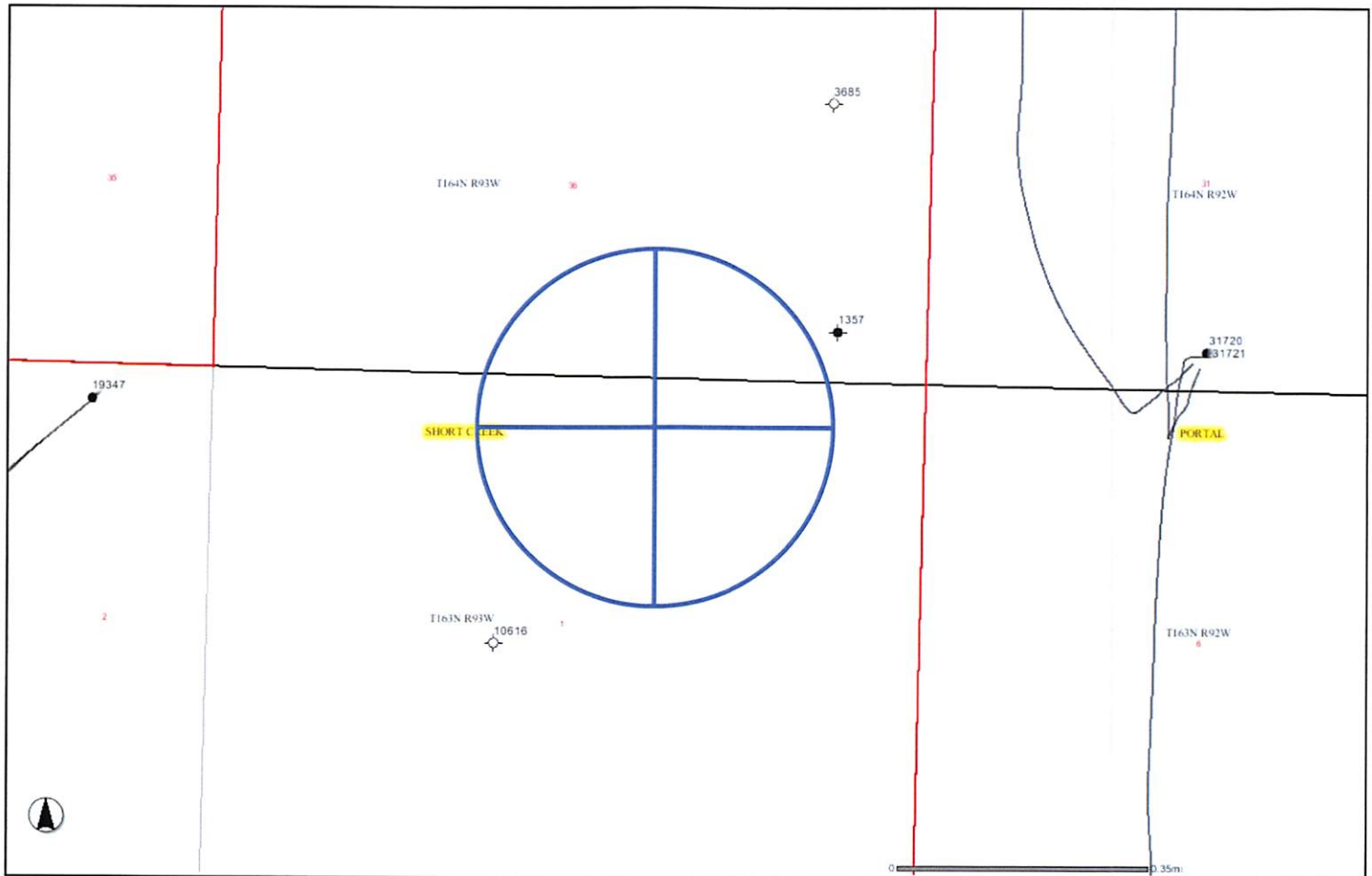
Depths calculated from NDIC's call of geologic tops in the offsetting BUSCH TRUST 31-30 164-92 B well (WF # 31720).

# Map of the 1/4-Mile Area of Review

GLASPEY SWD 1 – Windridge Operating LLC

Lot 2 Section 1-163-93

Short Creek Field-Burke County, ND



⊕ 1/4-mile AOR

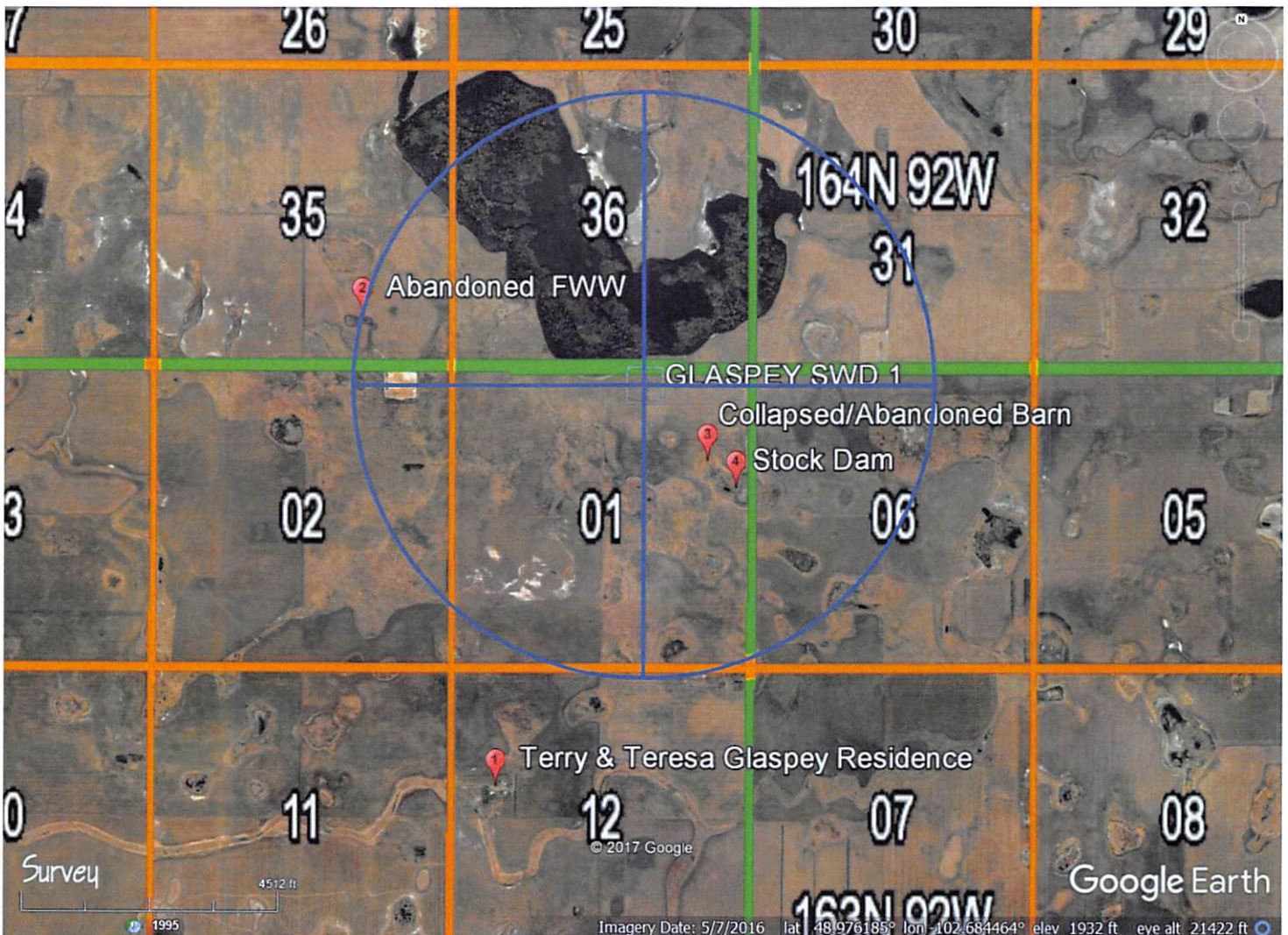
\*\*\* There are no vertical or horizontal wellbores within the 1/4-mile AOR. Therefore, no corrective action is required.

(Source: Oil & Gas ArcIMS Viewer as of 7/24/2017)



## Freshwater Investigation

GLASPEY SWD 1 – Windridge Operating LLC  
Lot 2 Section 1-163-93  
Short Creek Field-Burke County, ND



1-mile AOR

1. Terry & Teresa Glaspey FWW located in the SWNW of Section 12-163-93; 48.96075°, -102.69534°. Sample taken at 9:31 AM on 7/26/2017 from garage faucet. [Analysis attached](#). At that time, Terry stated that he is a 33 year resident at this location and that he knows of no producing freshwater wells that would be within a 1-mile radius of the proposed GLASPEY SWD 1 disposal well. He also noted that the FWW below the windmill in the SWSE of Section 35-164-93 was abandoned for decades; he could never remember of a producing well near the barn in the SENE of Section 1-163-93; and that the nearby stock dam is not spring fed as it typically goes dry in summer.
2. On 7/26/2017, walked location of windmill in SWSE of Section 35-164-93 and confirmed that well was buried.
3. On 7/26/2017, walked location of barn in SENE of Section 1-163-93 and was unable to find any sign of an active freshwater well.
4. Stock dam located SENE of Section 1-163-93. Terry Glaspey confirmed that this stock dam is not spring fed.

A representative for Windridge Operating LLC drove and glassed the area and was unable to discover any freshwater wells within a 1-mile radius.

**Affidavit of Investigation**  
GLASPEY SWD 1 – Windridge Operating LLC  
Lot 2 Section 1-163-93  
Short Creek Field-Burke County, ND

**AFFIDAVIT OF INVESTIGATION**

State of North Dakota       )  
  §§  
County of Burleigh        )

The undersigned, Thomas O Schumacher, a member of MidCon Resource Group, LLC and consultant for Windridge Operating LLC, do hereby certify that I, to the best of my ability, investigated a one-mile radius of the proposed GLASPEY SWD 1 salt water disposal well located within Lot 2 of Section 1, Township 163 North, Range 93 West, Burke County, North Dakota and was unable to locate any producing freshwater wells.

IN WITNESS WHEREOF, the undersigned has hereto set his hand this 14 day of August 2017.

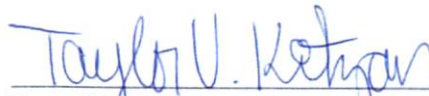
MidCon Resource Group, LLC:

  
Thomas O Schumacher, Member

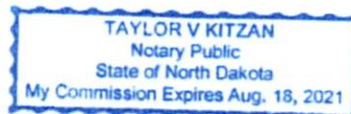
**Acknowledgment**

State of North Dakota       )  
  §§  
County of Burleigh        )

On this 14<sup>th</sup> day of August 2017, before me, a Notary Public, personally appeared Thomas O Schumacher, known to me to be the person whose name is subscribed to the foregoing instrument as a member of MidCon Resource Group, LLC, acknowledged to me that he executed the same for the purposes therein expressed, in the capacity stated, and as the free act and deed of said limited liability company.

  
Notary Public

My commission expires: August 18, 2021





# Analyses of the Water from the Nearest Freshwater Well

GLASPEY SWD 1 – Windridge Operating LLC

Lot 2 Section 1-163-93

Short Creek Field-Burke County, ND

## ASTRO-CHEM LAB, INC.

4102 2nd Ave. West

Williston, North Dakota 58802-0972  
P.O Box 972

Phone: (701) 572-7355

### WATER ANALYSIS REPORT

Sample Number: W-17-3832

Date of Analysis: 08/10/2017

Company: Windridge Operating, LLC.

City: Dallas

State: TX

Well Number: Terry & Teresa Glaspey FWW

Date Received: 07/26/2017

Depth:

Sample Source: Fresh Water Well - Garage Faucet

Location: SWNW

Section: 12

Twp: 163

Rng: 93

County: Burke

Distribution: Distribution List

Conductivity @ 77 °F	5420.00	uMHOS/cm	pH	8.00
Residual Sodium Carbonate	-8.00	MEQ/L	Hardness	58.4 Grains/gal
Sodium Adsorption Ratio	15.13		Hardness	1000 mg/L
Total Dissolved Solids (Calculated)	4525	mg/L		
Sodium Chloride (Calculated)	120	mg/L		

CATION	MEQ/L	mg/L	ANION	MEQ/L	mg/L
CALCIUM	4.8	96	CHLORIDE	2.1	73
MAGNESIUM	15.2	185	CARBONATE	0.0	0
SODIUM	47.8	1100	BICARBONATE	12.0	732
IRON	0.0	0.1	SULFATE	48.4	2323
POTASSIUM	0.3	11	NITRATE-N	0.4	5.0

Remarks: Sampled 7-26-17  
48.96075 / -102.69534

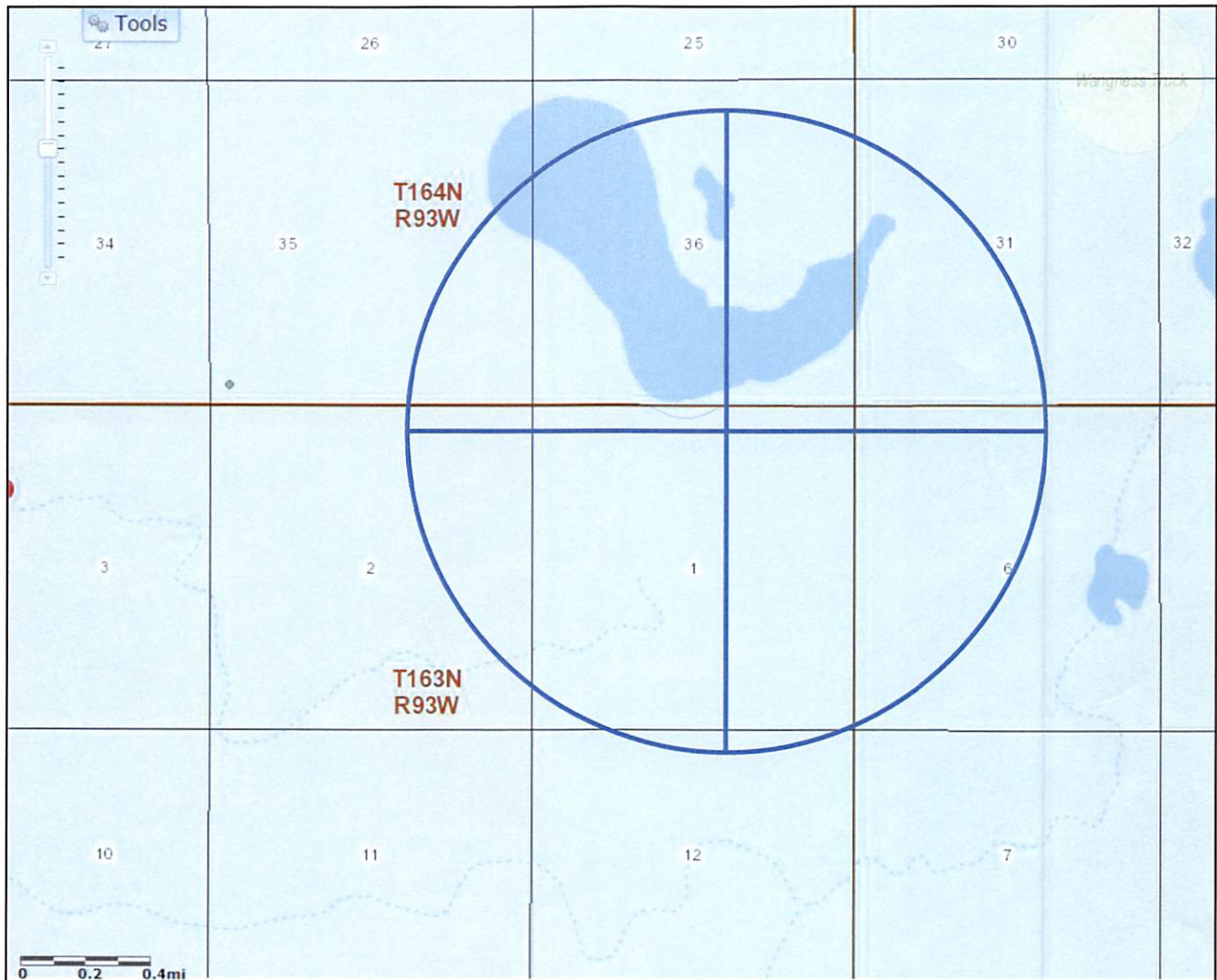
Analyzed By: C. Jungels

# Map and Discussion of Surficial Aquifers and Wellhead Protection Areas

GLASPEY SWD 1 – Windridge Operating LLC

Lot 2 Section 1-163-93

Short Creek Field-Burke County, ND



1-mile AOR

- According to the ND Hub Explorer website, there are no sensitive aquifers or wellhead protection areas within 1-mile of the proposed GLASPEY SWD 1 site that would preclude it from being a suitable location for a saltwater disposal facility.
- The nearest freshwater well lithologic log to the proposed location is located in the SWNW of Section 14-163-93. The log for this well is included in the Soil Discussion portion of this application.

# Soil Discussion

GLASPEY SWD 1 – Windridge Operating LLC  
Lot 2 Section 1-163-93  
Short Creek Field-Burke County, ND

STATE OF NORTH DAKOTA  
**BOARD OF WATER WELL CONTRACTORS**  
900 E. BOULEVARD AVE., DEPT. 770 • BISMARCK, NORTH DAKOTA 58505-0850

**WELL DRILLER'S REPORT**

State law requires that this report be filed with the State Board of Water Well Contractors within 30 days after completion or abandonment of the well.

<b>1. WELL OWNER</b> Name <u>Josh Johnstone</u> Address <u>Box 31</u> <u>Columbus ND</u>	<b>7. WATER LEVEL</b> Static water level <u>62</u> feet below surface If flowing: closed-in pressure _____ psi GPM flow _____ through _____ inch pipe Controlled by: <input type="checkbox"/> Valve <input type="checkbox"/> Reducers <input type="checkbox"/> Other If other, specify _____																							
<b>2. WELL LOCATION</b> Sketch map location must agree with written location.  County <u>Burke</u> Sec. (1 mile) _____ <u>1/4 SW 1/4 NW 1/4 Sec. 14 Twp. 163 N. R. 93 W.</u>	<b>8. WELL TEST DATA</b> <input checked="" type="checkbox"/> Pump <input type="checkbox"/> Bailer <input type="checkbox"/> Other Pumping level below land surface: <u>227</u> ft. after <u>1</u> hrs. pumping <u>12</u> gpm _____ ft. after _____ hrs. pumping _____ gpm _____ ft. after _____ hrs. pumping _____ gpm																							
<b>3. PROPOSED USE</b> <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Geothermal <input type="checkbox"/> Monitoring <input type="checkbox"/> Stock <input type="checkbox"/> Irrigation <input type="checkbox"/> Industrial <input type="checkbox"/> Municipal <input type="checkbox"/> Test Hole	<b>9. WELL LOG</b> <table border="1"><thead><tr><th rowspan="2">Formation</th><th colspan="2">Depth (ft.)</th></tr><tr><th>From</th><th>To</th></tr></thead><tbody><tr><td>Brown clay</td><td>0</td><td>22</td></tr><tr><td>Grey clay with rocks</td><td>22</td><td>68</td></tr><tr><td>Sandy grey clay</td><td>68</td><td>98</td></tr><tr><td>Sandy clay &amp; gravel</td><td>98</td><td>225</td></tr><tr><td>Blue sand &amp; fine</td><td>225</td><td>350</td></tr><tr><td></td><td>350</td><td></td></tr></tbody></table>	Formation	Depth (ft.)		From	To	Brown clay	0	22	Grey clay with rocks	22	68	Sandy grey clay	68	98	Sandy clay & gravel	98	225	Blue sand & fine	225	350		350	
Formation	Depth (ft.)																							
	From	To																						
Brown clay	0	22																						
Grey clay with rocks	22	68																						
Sandy grey clay	68	98																						
Sandy clay & gravel	98	225																						
Blue sand & fine	225	350																						
	350																							
<b>4. METHOD DRILLED</b> <input type="checkbox"/> Cable <input type="checkbox"/> Reverse Rotary <input type="checkbox"/> Bored <input checked="" type="checkbox"/> Forward Rotary <input type="checkbox"/> Jetted <input type="checkbox"/> Auger If other, specify _____																								
<b>5. WATER QUALITY</b> Was a water sample collected for: Chemical Analysis? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Bacteriological Analysis? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If so, to what laboratory was it sent? <u>AstroChem</u>																								
<b>6. WELL CONSTRUCTION</b> Diameter of hole <u>8.75</u> inches. Depth <u>348</u> feet. Casing: <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Threaded <input type="checkbox"/> Welded <input type="checkbox"/> Other If other, specify _____ Pipe Weight: <u>3</u> lb/ft Diameter: <u>5</u> inches From: <u>0</u> feet To: <u>318</u> feet ____ lb/ft _____ inches _____ feet _____ feet ____ lb/ft _____ inches _____ feet _____ feet Was perforated pipe used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Perforated pipe set from _____ ft. to _____ feet Was casing left open end? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Was a well screen installed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Material <u>PVC</u> Diameter <u>5</u> inches Slot Size <u>.025</u> set from <u>328</u> feet to <u>348</u> feet Slot Size <u>.018</u> set from <u>318</u> feet to <u>328</u> feet Was packer or seal used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If so, what material _____ Depth _____ ft. Type of well: Straight screen <input type="checkbox"/> Gravel packed <input checked="" type="checkbox"/> Depth grouted: From <u>60</u> To <u>10</u> Grouting Material: Cement <input type="checkbox"/> Other <input checked="" type="checkbox"/> If other, explain: <u>Bentonite chips</u> Well head completion: Pitless unit <input checked="" type="checkbox"/> 12" above grade _____ Other _____ If other, specify _____ Was pump installed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Was well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																								
	<b>10. DATE COMPLETED</b> <u>8-14-14</u>																							
	<b>11. WAS WELL PLUGGED OR ABANDONED?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If so, how _____																							
	<b>12. REMARKS:</b>																							
	<b>13. DRILLER'S CERTIFICATION</b> This well was drilled under my jurisdiction and this report is true to the best of my knowledge. <u>S&amp;S Drilling Inc</u> <u>142</u> Driller's or Firm's Name Certificate No. <u>5030 133 amwru Williston ND 58801</u> Address <u>741 S</u> <u>8-19-14</u> Signed by Date																							

\*\*\* The above lithologic log is from a freshwater well reportedly located ~2.75 miles southwest of the proposed GLASPEY SWD 1 location. Windridge Operating, LLC anticipates similar soil types with adequate containment properties will be found at the proposed location.

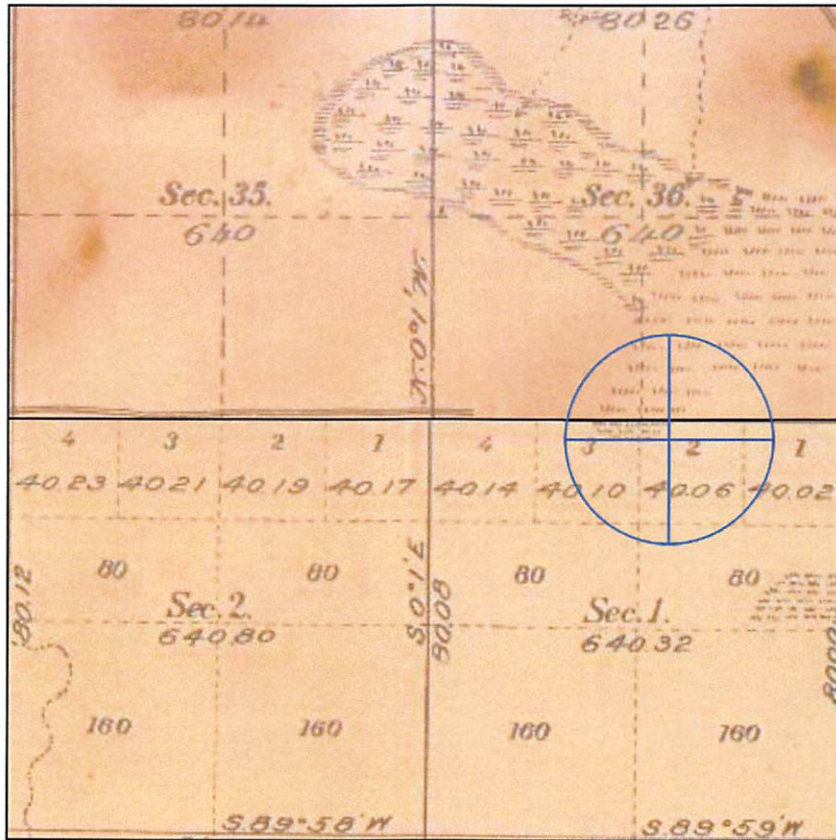


# Land Ownership Description

GLASPEY SWD 1 – Windridge Operating LLC

Lot 2 Section 1-163-93

Short Creek Field-Burke County, ND



SURFACE OWNERS WITHIN 1/4-MILE OF THE PROPOSED GLASPEY SWD 1			
Parcel #	Section Township Range	Description	Landowner Name & Address
6000000	1-163-93	S2NE & Lots 1, 2	TERRY L. & TERESA GLASPEY 10660 91ST AVE NW PORTAL ND 58772
6001000	1-163-93	S2NW & Lots 3, 4	Tx3 LLLP 662 SUNSET CT SHOREVIEW MN 55126
	36-164-93	ALL	ND DEPT OF TRUST LANDS PO BOX 5523 BISMARCK ND 58506-5523

\*\*\*\* Source <http://burkend.mygisonline.com/>

**Surface Owner Addresses in the Area of Review**

TERRY L. & TERESA GLASPEY  
10660 91ST AVE NW  
PORTAL ND 58772

TX3 LLLP  
662 SUNSET CT  
SHOREVIEW MN 55126

ND DEPT OF TRUST LANDS  
PO BOX 5523  
BISMARCK ND 58506-5523

**Affidavit of Mailing and Copies of Notices Sent**

GLASPEY SWD 1 – Windridge Operating LLC

Lot 2 Section 1-163-93

Short Creek Field-Burke County, ND



## CASE NO. \_\_\_\_\_

## AFFIDAVIT OF SERVICE BY MAIL

## Application of Windridge Operating LLC and Memo

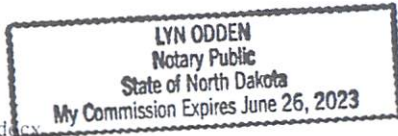
ND DEPT OF TRUST LANDS  
PO BOX 5523  
BISMARCK ND 58506-5523

and depositing the same, with postage prepaid, in the United States mail at Bismarck, North Dakota.

  
Kim Egge

Subscribed and sworn to before me this 14th day of August, 2017.

  
Notary Public  
My Commission expires:



61925225\_1.docx

# M\*E\*M\*O

**TO:** Terry L. and Teresa Glaspey

**DT:** August 14, 2017

**RE:** Glaspey SWD 1 Well

This Memo is to advise you that Windridge Operating LLC has made application to the North Dakota Industrial Commission ("Commission") for an order of the Commission authorizing the drilling of a salt water disposal well to be located in Lot 2 of Section 1, Township 163 North, Range 93 West, Short Creek Field, Burke County, North Dakota, in the Dakota Group pursuant to Chapter 43-02-05 of the North Dakota Administrative Code.

Should you have any questions, please contact either Mr. Matt Billingsley with Windridge Operating LLC, at (830) 331-7422, or Ms. Ashleigh Day with the Commission, Oil and Gas Division, at (701) 328-8020.

# M\*E\*M\*O

**TO:** TX3 LLLP

**DT:** August 14, 2017

**RE:** Glaspey SWD 1 Well

This Memo is to advise you that Windridge Operating LLC has made application to the North Dakota Industrial Commission ("Commission") for an order of the Commission authorizing the drilling of a salt water disposal well to be located in Lot 2 of Section 1, Township 163 North, Range 93 West, Short Creek Field, Burke County, North Dakota, in the Dakota Group pursuant to Chapter 43-02-05 of the North Dakota Administrative Code.

Should you have any questions, please contact either Mr. Matt Billingsley with Windridge Operating LLC, at (830) 331-7422, or Ms. Ashleigh Day with the Commission, Oil and Gas Division, at (701) 328-8020.

# M\*E\*M\*O

**TO:** North Dakota Department of Trust Lands

**DT:** August 14, 2017

**RE:** Glaspey SWD 1 Well

This Memo is to advise you that Windridge Operating LLC has made application to the North Dakota Industrial Commission ("Commission") for an order of the Commission authorizing the drilling of a salt water disposal well to be located in Lot 2 of Section 1, Township 163 North, Range 93 West, Short Creek Field, Burke County, North Dakota, in the Dakota Group pursuant to Chapter 43-02-05 of the North Dakota Administrative Code.

Should you have any questions, please contact either Mr. Matt Billingsley with Windridge Operating LLC, at (830) 331-7422, or Ms. Ashleigh Day with the Commission, Oil and Gas Division, at (701) 328-8020.

### **Maximum Injection Pressure Calculation**

$$P_{\max} = P_{\text{fracture}} - P_{\text{hydrostatic}} + P_{\text{friction}}$$

$$P_{\max} = (D * G_f) - (.052 * 8.34 * SG * D) + (0)$$

**where**

$P_{\max}$  = Maximum Surface Injection Pressure

$P_{\text{fracture}}$  = Estimated fracture pressure of upper confining zone

$P_{\text{hydrostatic}}$  = Pressure of fluid column

$P_{\text{friction}}$  = Pressure loss due to friction within tubing (Considered 0 for added SF)

D = Depth to top of injection zone (3,930')

SG = Specific Gravity of injection fluid from analysis (1.205)

$G_f$  = Fracture Gradient of Upper Confining Zone (Mowry Shale estimated 0.8)

**therefore**

$$P_{\max} = (D * G_f) - (0.052 * 8.34 * SG * D) + (0)$$

$$P_{\max} = (3,930 * .8) - (0.052 * 8.34 * 1.205 * 3,930) + (0)$$

$$P_{\max} = 3,144 - 2,054 = 1,090 \text{ psi}$$

### **Estimated Injection Rates**

The estimated average injection rate is 6,000 BWPD at an estimated pressure of 600 psi.

Maximum injection rate will be 11,500 BWPD at 1,075 psi.

### **Depth to Base of Fresh Water Zone**

The Fox Hills Formation is the lowest-most freshwater aquifer in this area and overlies the Pierre Formation. Depth to base of freshwater zone is approximately 1125' KB and was calculated from the NDIC's call of the top of the Pierre Formation in the offsetting BUSCH TRUST 31-30 164-92 B well (WF # 31720). This value is consistent with the 1120' value calculated from the Pierre Shale Top MM-23 map.

### **Injection Plan**

Windridge Operating LLC plans to drill a vertical salt water disposal well with rotary tools to 4,500'. The well will be completed as a salt water disposal well in the Dakota Group. Produced water from wells within the surrounding area will be piped through a gathering system of low pressure buried poly lines. The water will be stored on location, pressurized, and disposed in the Dakota Group. The site is expected to handle 6,000-11,500 barrels per day at a pressure of 1,075 psi or less.



### **Sources of Injected Fluid**

The GLASPEY SWD 1 will primarily be a pipeline facility with occasional truck deliveries prior to the completion of the gathering line. The source of produced water will be piped water from any existing or future production wells in this area as defined by the NDIC Oil & Gas records. The operator, well name and number, well file #, location, water type, volumes, and transportation method of all water will be reported monthly on a Form 16-16A (NDIC Saltwater Disposal Report).

### **Corrective Action Statement of Wells within ¼-Mile Area of Review**

There are no vertical wellbores or horizontal laterals within the ¼-Mile area of review. *Therefore, no corrective action is required.*

### **Containment Calculations**

Paragraph (3b) of NDAC 43-02-03-53 state in part, "Dikes must be of sufficient dimension to contain the total capacity of the largest tank plus one day's fluid production".

Largest tank proposed	500 bbls
Requested Max. Daily Injection Rate of GLASPEY SWD 1	<u>11,500 bbls</u>
Required Containment	12,000 bbls
Proposed Primary Steel Containment	12,000 bbls (280'x80'x3')
Proposed Secondary Earthen Berm Containment	~125,000 bbls

### **Logging and Test Data**

This is a proposed well. All available logs and test data that are run on the well during completion will be promptly submitted to the NDIC.

# Analysis of Representative Sample of Injection Fluid

GLASPEY SWD 1 – Windridge Operating LLC

Lot 2 Section 1-163-93

Short Creek Field-Burke County, ND

## ASTRO-CHEM LAB, INC.

4102 2nd Ave. West

Williston, North Dakota 58802-0972  
P.O Box 972

Phone: (701) 572-7355

### WATER ANALYSIS REPORT

Sample Number: W-17-3831

Date of Analysis: 08/10/2017

Company: Windridge Operating, LLC.

City: Dallas

State: TX

Well Number: Nelson Unit 1

Date Received: 07/26/2017

DST Number:

Sample Source: Produced Water

Location: NWNE

Section: 2

Township: 162

Range: 91

County: Burke

Formation:

Depth:

Distribution: Distribution List

Resistivity @ 77 °F

0.039 Ohm-Meters

pH 6.65

Specific Gravity @ 77 °F

1.205

H2S Negative

Total Dissolved Solids (Calculated)

300868 mg/L

( 249683 ppm)

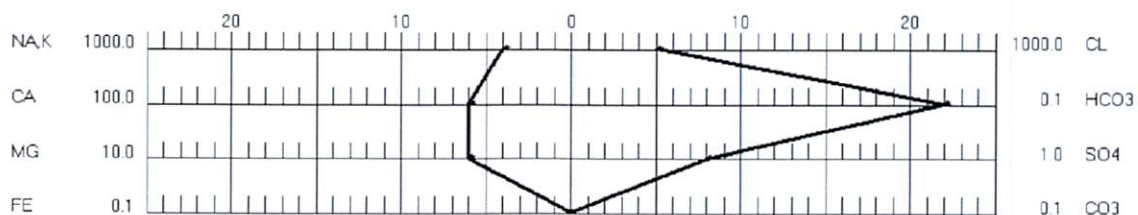
Sodium Chloride (Calculated)

303343 mg/L

( 251737 ppm)

CATION	MEQ/L	mg/L	ANION	MEQ/L	mg/L
CALCIUM	580.0	11623	CHLORIDE	5188.8	183959
MAGNESIUM	60.0	729	CARBONATE	0.0	0
SODIUM	4349.8	100000	BICARBONATE	2.2	134
IRON	0.0	0.6	SULFATE	7.6	363
CHROMIUM	0.1	0.9	NITRATE	0.0	0
BARIUM	0.1	8.9			
POTASSIUM	103.6	4050			

### WATER ANALYSIS PATTERN



Remarks: Sampled 7-26-17  
48.89355 / -102.44525

Analyzed By: C. Jungels



# SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

INDUSTRIAL COMMISSION OF NORTH DAKOTA

OIL AND GAS DIVISION

600 EAST BOULEVARD DEPT 405

BISMARCK, ND 58505-0840

SFN 5749 (09-2006)



Well File No.

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.

PLEASE SUBMIT THE ORIGINAL AND ONE COPY.

<input type="checkbox"/> Notice of Intent	Approximate Start Date	<input type="checkbox"/> Drilling Prognosis	<input type="checkbox"/> Spill Report
<input type="checkbox"/> Report of Work Done	Date Work Completed	<input type="checkbox"/> Redrilling or Repair	<input type="checkbox"/> Shooting
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.	Approximate Start Date	<input type="checkbox"/> Casing or Liner	<input type="checkbox"/> Acidizing
		<input type="checkbox"/> Plug Well	<input type="checkbox"/> Fracture Treatment
		<input type="checkbox"/> Supplemental History	<input type="checkbox"/> Change Production Method
		<input type="checkbox"/> Temporarily Abandon	<input type="checkbox"/> Reclamation
		<input checked="" type="checkbox"/> Other	Request for Variance to 43-02-03-53-3(b)

Well Name and Number <b>GLASPEY SWD 1</b>					
Footages <b>310 F N L 2000 F E L</b>		Qtr-Qtr <b>LOT 2</b>	Section <b>1</b>	Township <b>163 N</b>	Range <b>93 W</b>
Field <b>SHORT CREEK</b>	Pool <b>DAKOTA GROUP</b>	County <b>BURKE</b>			

24-HOUR PRODUCTION RATE			
Before		After	
Oil	Bbls	Oil	Bbls
Water	Bbls	Water	Bbls
Gas	MCF	Gas	MCF

Name of Contractor(s) <b>TBD</b>			
Address	City	State	Zip Code

## DETAILS OF WORK

43-02-03-53-3(b)... Dikes must be of sufficient dimension to contain the total capacity of the largest tank plus one day's fluid production. Background: The capacity of the largest tank at the proposed GLASPEY SWD 1 will be 500 bbls. The proposed dimension of the primary steel containment about all tanks is 280'x80'x3' yielding an apparent capacity of ~12,000 bbls. There will also be an earthen perimeter berm about the entire facility with a projected capacity of 125,000 bbls.

Windridge Operating LLC respectfully requests a variance to 43-02-03-53-3(b) and approval to inject at a maximum allowable rate of 11,500 bbls/day at the GLASPEY SWD 1 disposal facility with the following justifications:

- 1) The facility will be monitored 24/7 via SCADA; 2) The SCADA system will continuously monitors all aspects of the operations including injection rate and pressure, receipt rate, tank levels, and other critical process volumetric and pressure data; 3) Equipment automation will reduce or prevent flow of inlet fluids in the event tank levels reach high or maximum levels; 4) Spill detection automation inside the primary containment and operating abnormalities will shut down the process and notify a pumper in the area; 5) The facility is physically inspected at least once per day by trained personnel; 6) Steel primary containment volume will exceed the maximum capacity of all tanks by 9500 bbls; 7) Secondary containment will exceed the requested maximum rate by 113,500 bbls.

*\* Approval Contingent on Submission of an as-built site schematic after site and facility construction is complete.*

Company <b>WINDRIDGE OPERATING LLC</b>		Telephone Number <b>(830) 331-7422</b>	
Address <b>518 N MAIN STREET</b>			
City <b>BOERNE</b>		State <b>TX</b>	Zip Code <b>78006</b>
Signature <i>Matthew Billingsley</i>		Printed Name <b>MATTHEW BILLINGSLEY</b>	
Title <b>VP EXPLORATION</b>		Date <b>10/16/17</b>	
Email Address <b>matt@windridgeoil.com</b>			

FOR STATE USE ONLY	
<input type="checkbox"/> Received	<input type="checkbox"/> Approved <i>✓</i>
Date	
By	
Title	



## Short Creek Field-Burke County, ND

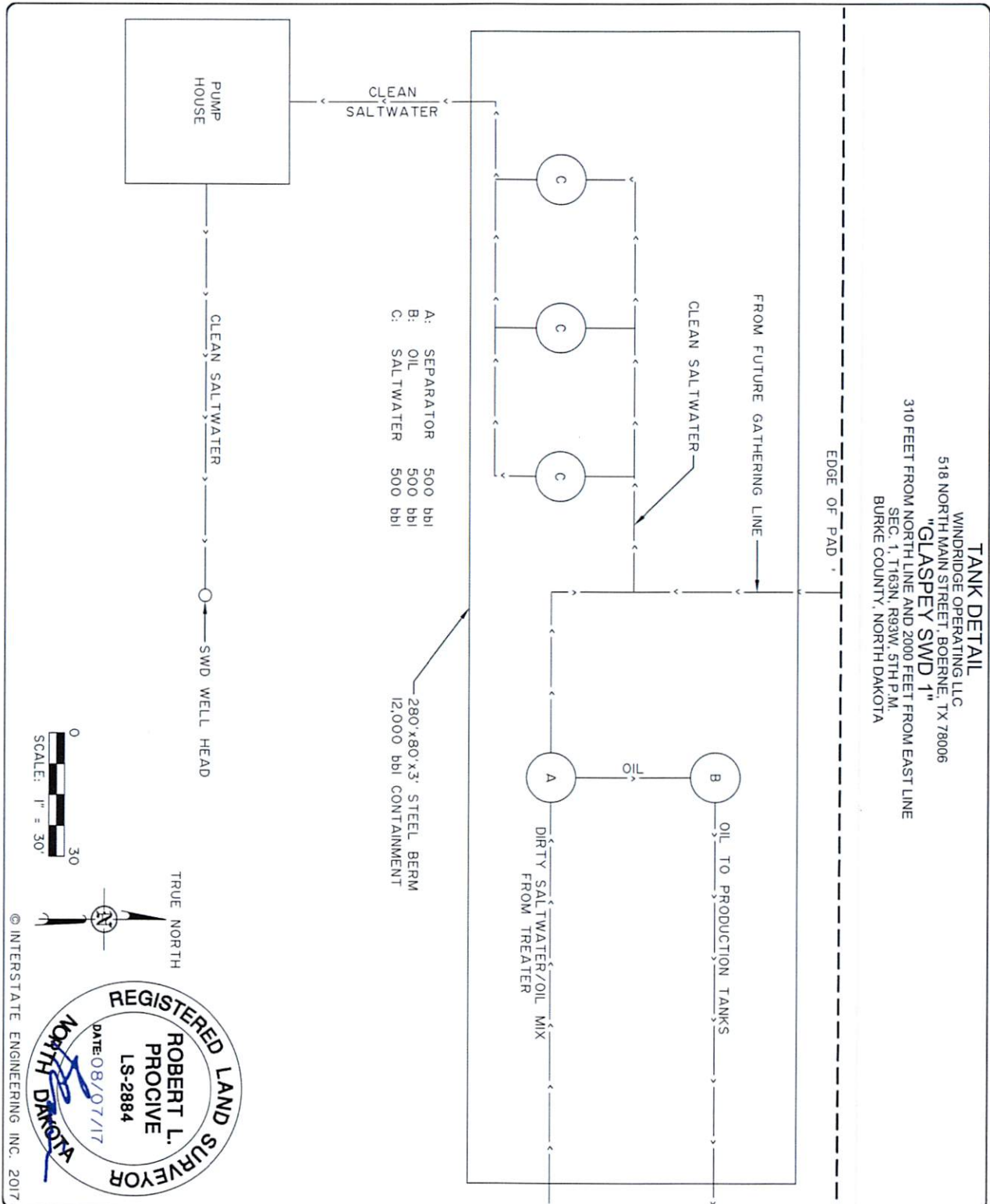


# Schematic of Tank Capacity and Purpose

GLASPEY SWD 1 – Windridge Operating LLC

Lot 2 Section 1-163-93

Short Creek Field-Burke County, ND



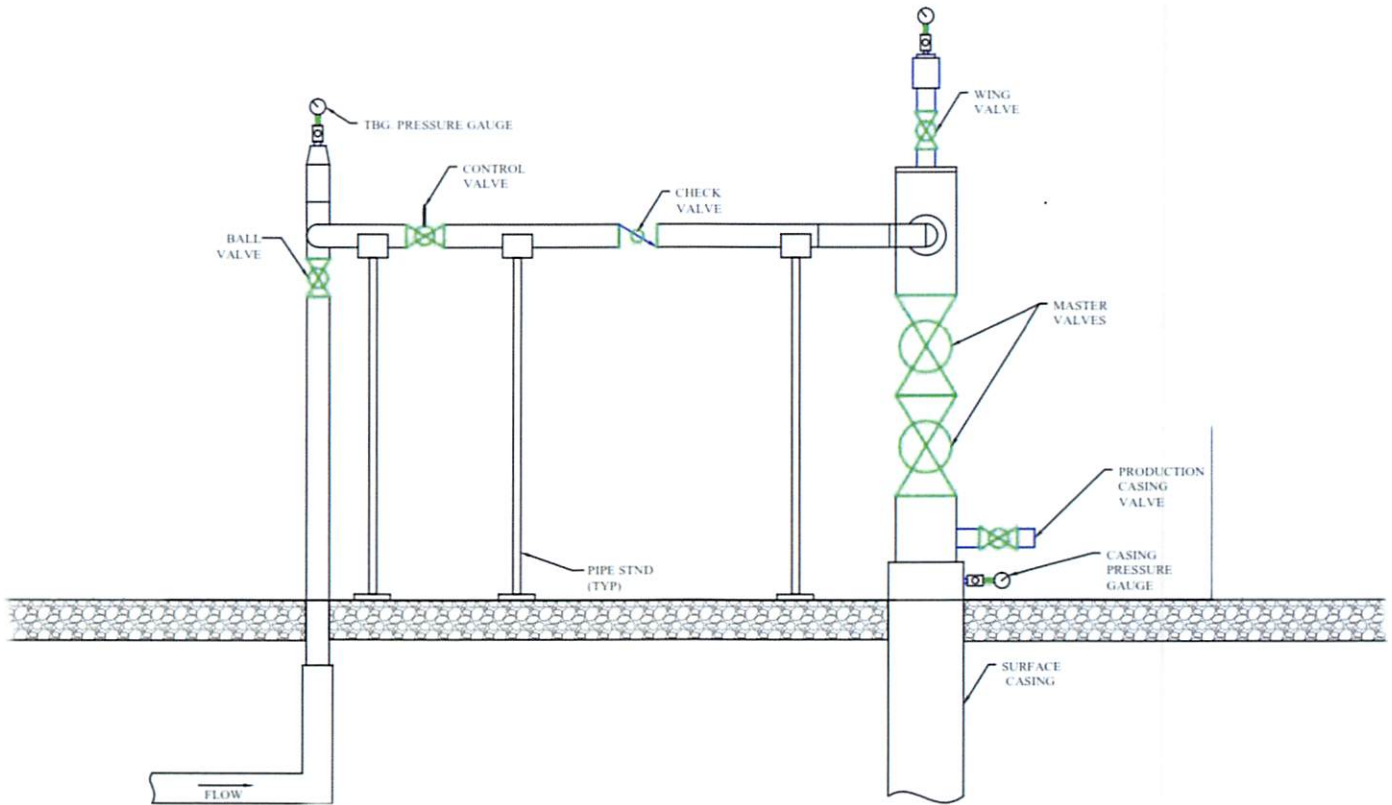


# Schematics of Wellhead Construction

GLASPEY SWD 1 – Windridge Operating LLC

Lot 2 Section 1-163-93

Short Creek Field-Burke County, ND





**SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4**  
INDUSTRIAL COMMISSION OF NORTH DAKOTA  
OIL AND GAS DIVISION  
600 EAST BOULEVARD DEPT 405  
BISMARCK, ND 58505-0840  
SFN 5749 (09-2006)

**RECEIVED**

**AUG 15 2017**

Well File No.

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.  
PLEASE SUBMIT THE ORIGINAL AND ONE COPY.

**ND Oil & Gas Div.**

<input checked="" type="checkbox"/> Notice of Intent	Approximate Start Date <b>September 1, 2017</b>
<input type="checkbox"/> Report of Work Done	Date Work Completed
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.	Approximate Start Date

<input type="checkbox"/> Drilling Prognosis	<input type="checkbox"/> Spill Report
<input type="checkbox"/> Redrilling or Repair	<input type="checkbox"/> Shooting
<input type="checkbox"/> Casing or Liner	<input type="checkbox"/> Acidizing
<input type="checkbox"/> Plug Well	<input type="checkbox"/> Fracture Treatment
<input type="checkbox"/> Supplemental History	<input type="checkbox"/> Change Production Method
<input type="checkbox"/> Temporarily Abandon	<input type="checkbox"/> Reclamation
<input checked="" type="checkbox"/> Other	<b>COMPLETE WELL AS DISPOSAL</b>

Well Name and Number <b>GLASPEY SWD 1</b>							
Footages		Qtr-Qtr		Section		Township	
<b>310 F N L 2000 F E L</b>		<b>LOT 2</b>		<b>1</b>		<b>163 N</b>	
Range		Field		Pool		County	
<b>93 W</b>		<b>SHORT CREEK</b>		<b>DAKOTA GROUP</b>		<b>BURKE</b>	

24-HOUR PRODUCTION RATE			
Before		After	
Oil	Bbls	Oil	Bbls
Water	Bbls	Water	Bbls
Gas	MCF	Gas	MCF

Name of Contractor(s) <b>TBD</b>			
Address	City	State	Zip Code

**DETAILS OF WORK**

Notify NDIC Field Inspector at least 24 hours prior to initiating site construction. MIRU. NU BOP. Drill 13-1/2" hole with fresh water mud to 1,350' (at least 50' of casing into Pierre Shale). Run 9-5/8" 36 lb/ft surface casing and cement to surface under existing regulations. WOC. Drill out with 8-3/4" bit to a projected depth of 4,500' with salt water gel system. Run 7" 26 lb/ft production string to ~4,500' and cement under existing regulations to ~2,800'. WOC. Test 7" casing to 1,500 psi for 30 minutes. Log well w/GR & CBL and submit to NDIC. Perforate 7" casing within Inyan Kara interval at approximately 4,015'- 4,305 'KB (exact depths TBD from log). Acidize if necessary. TIH w/new 4-1/2" Seal-tite tubing and set Arrowset I-X packer @ +/- 3,985' KB (must be within 100' of top perf). Schedule Mechanical Integrity Test (MIT) with NDIC Field Inspector. Perform witnessed 1000 psi, 15 minute MIT and with approval from field inspector, plumb and initiate injection. Submit Completion Report (Form 6) and Sundry Notice (Form 4) with Date of 1st Injection.

Company <b>WINDRIDGE OPERATING LLC</b>		Telephone Number <b>(830) 331-7422</b>	
Address <b>518 N MAIN STREET</b>			
City <b>BOERNE</b>		State <b>TX</b>	Zip Code <b>78006</b>
Signature 		Printed Name <b>MATTHEW BILLINGSLEY</b>	
Title <b>VP EXPLORATION</b>		Date <b>8/14/17</b>	
Email Address <b>matt@windridgeoil.com</b>			

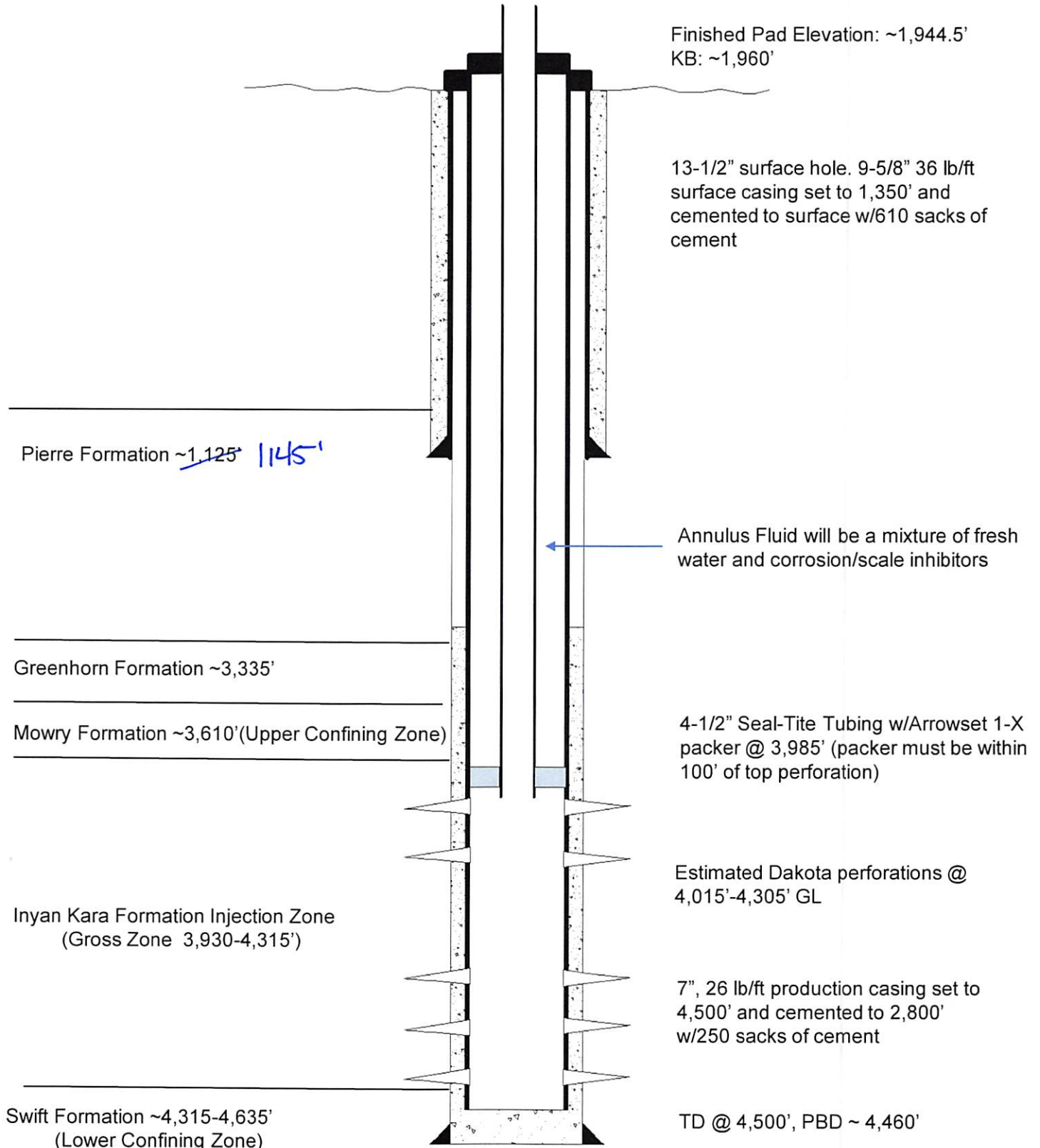
FOR STATE USE ONLY	
<input type="checkbox"/> Received	<input type="checkbox"/> Approved
Date	
By	
Title	

# Schematic of Proposed Wellbore Construction

GLASPEY SWD 1 – Windridge Operating LLC

Lot 2 Section 1-163-93

Short Creek Field-Burke County, ND



\*\*\*\* Not to Scale. All depth referenced from estimated 1,960' KB elevation



**Approach Permit for Facility**  
GLASPEY SWD 1 – Windridge Operating LLC  
Lot 2 Section 1-163-93  
Short Creek Field-Burke County, ND

**Short Creek Township Approach Permit**

Applicant Windridge Operating, LLC

Address 518 N Main Street Boerne, TX 78006

Phone # 830-331-7420

Contractor TBD

Contractor's Phone # \_\_\_\_\_

Township Name Short Creek Township

Section-Township-Range 1-163N-93W

Location in Section Lot 2

Approach Type: ☒ New ☐ Improved ☐ Temporary ☐ Other \_\_\_\_\_

Approach Use: ☐ Residential ☐ Commercial ☐ Field Access ☒ Other Oil/SWD Facility

Additional Information \_\_\_\_\_

Accessing: County Road 108th Street NW

Approach Width (20 ft. min) (25 ft. rad) 30 Ft

Culvert Required: ☐ No ☒ Yes Size (18 inch min) X CMP

If determined by the road department a culvert is needed & size of, the cost of the culvert will be charged to the owner/applicant.

Remarks: \_\_\_\_\_

I, the owner/applicant of the above mentioned property/project, agree to construct the approach for the property noted above, as required by the attached minimum standards and any additional conditions noted above. I also agree that if I don't follow the standards, the Authorizing Agency may construct the approach as needed, or cancel this permit and remove the driveway and charge all costs to the owner/applicant. This permit must be on site with the contractor during construction.

Matthew Billingsley  
Owner/Applicant (Print and Sign)

Carol Petersen  
Short Creek Township Supervisor

830-331-7422  
Phone Number

701-705-4885  
Phone Number

8/4/2017  
Date

8-7-17  
Date



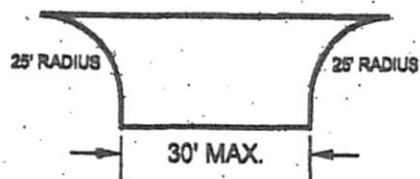
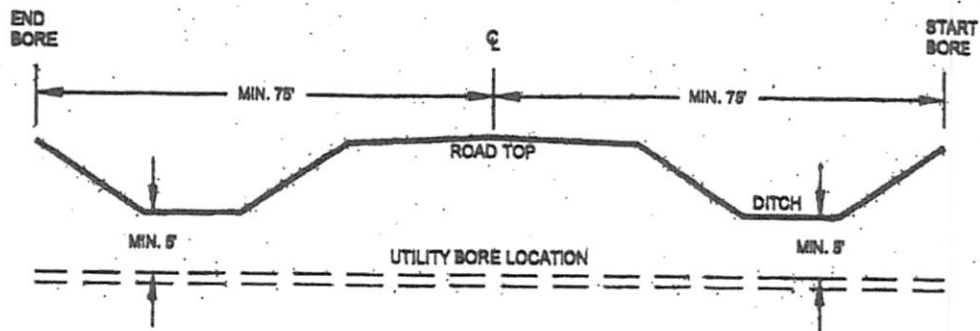
## Approach Permit for Facility (Cont.)

GLASPEY SWD 1 – Windridge Operating LLC

Lot 2 Section 1-163-93

Short Creek Field-Burke County, ND

### UTILITY CROSSING STANDARD DESIGN



### STANDARD APPROACH DESIGN

NOT TO SCALE

V:\GENERAL\2009\09-2-5 UTILITY CROSSING\09-2-5.dwg

Project:	
Date:	
Scale:	1"=1'

# **DRAFT Spill Prevention, Control, and Countermeasure Plan**

Kestrel 36-25 1H and  
Glaspey SWD 1 Facility  
Section 1, T163N, R93W  
Burke County, North Dakota



*Prepared for:*

**Windridge Operating LLC**

## **Emergency Contacts (40 CFR 109.5[b][2])**

<b>Designated Management Representative</b>	
Lee Billingsley, President	210.601.1110 (cell)
<b>Facility Contact</b>	
Ren Gardner, Site Manager	xxx.xxx.xxxx (cell)
<b>Local Emergency Response</b>	
Columbus Fire & Ambulance	911 or 701.939.4221
St. Luke's Hospital, Crosby, ND	701.965.6384
<b>Response/Cleanup Contractors</b>	
Cleanup Contractor TBD	TBD
Braun Intertec	701.232.8701
<b>Notification</b>	
North Dakota Industrial Commission - Oil and Gas Division (for RCRA-exempt oil field incident reporting)	701.328.8020
North Dakota Department of Health – Environmental Health Section (for RCRA non-exempt incident reporting or oil tanker spills)	701.328.5210 or 701.328.5166
North Dakota Department of Emergency Services (24-Hour Hotline)	800.472.2121
National Response Center	800.424.8802
United States Environmental Protection Agency, Region 8	800.227.8917

*Prepared by:*

Braun Intertec Corporation

October 16, 2017  
Project: B1710477

### Management Approval and Designated Person (40 CFR 112.7)

Windridge Operating LLC (Windridge) management staff is committed to preventing discharges of oil to navigable waters and the environment, and to maintaining high standards for spill prevention control and countermeasures through the implementation and regular review and amendment to the Plan. This SPCC Plan has the full approval of facility management, and facility management staff has committed the necessary resources to implement the measures described in this Plan.

The Windridge Operating LLC Manager is the Designated Person accountable for Oil Spill Prevention at the Facility and has the authority to commit the necessary resources to implement this Plan.

Signature: \_\_\_\_\_  
Name: Lee Billingsley  
Title: President  
Date: \_\_\_\_\_

### Professional Engineer Certification (40 CFR 112.3[d])

The undersigned Registered Professional Engineer is familiar with the requirements of Part 112 of Title 40 of the *Code of Federal Regulations* (40 CFR part 112) and has visited and examined the facility, or has supervised examination of the facility by appropriately qualified personnel. The undersigned Registered Professional Engineer attests that this Spill Prevention, Control, and Countermeasure Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards and the requirements of 40 CFR part 112; that procedures for required inspections and testing have been established; and that this Plan is adequate for the facility. [40 CFR 112.3(d)]

This certification in no way relieves the owner or operator of the facility of his/her duty to prepare and fully implement this SPCC Plan in accordance with the requirements of 40 CFR part 112. This Plan is valid only to the extent that the facility owner or operator maintains, tests, and inspects equipment, containment, and other devices as prescribed in this Plan.

Jill C. Mickelson, PE

Printed Name of Registered Professional Engineer

\_\_\_\_\_  
Signature of Registered Professional Engineer

Registration No. PE-7138 State ND

Date: October 16, 2017

## TABLE OF CONTENTS

1.0	Introduction and Purpose .....	1
1.1	Summary of Applicable Regulations .....	1
1.1.1	United States Environmental Protection Agency .....	1
1.1.2	North Dakota Industrial Commission.....	2
1.2	Plan Review (40 CFR 112.3 and 112.5) .....	2
1.2.1	Amendments by owner/operator request .....	2
1.2.2	Amendments by USEPA Request .....	3
1.3	Plan Review Log .....	3
1.4	Facilities, Procedures, Methods, or Equipment To Be Implemented .....	4
1.5	Suggested Best Management Practices.....	4
2.0	General Facility Information .....	6
2.1	Facility Description (40 CFR 112.7[a][3]) .....	6
2.2	Bulk Storage Containers (40 CFR 112.7[a][3] and 112.9[c]) .....	7
2.2.1	Construction (40 CFR 112.9[c][1]).....	7
2.2.2	Secondary Containment (40 CFR 112.9[c][2] & N.D. Rules Ch. 43-02-03-49, Ch. 43-02-03-53) .....	8
2.3	Discharge History .....	9
3.0	Discharge Prevention and Control.....	10
3.1	Compliance with Applicable Requirements (40 CFR 112.7[a][1]).....	10
3.2	Spill Reporting (40 CFR 112.7[a][4]).....	10
3.3	Potential Discharge Volumes and Direction of Flow (40 CFR 112.7[b]) .....	10
3.4	Containment and Diversionary Structures (40 CFR 112.7[c], 112.9[c][2],[4]) .....	11
3.5	Practicability of Secondary Containment (40 CFR 112.7[d]) .....	11
3.6	Oil Production Facility Drainage Requirements (40 CFR 112.9[b]).....	11
3.6.1	Produced Water Containers Oil/Water Separation (40 CFR 112.9[c][1-4]).....	12
3.7	Tank Truck Loading/Unloading Rack Requirements (40 CFR 112.7[h]).....	12
3.7.1	Loading/Unloading Procedures (40 CFR 112.7[h][2] and [3]).....	12
3.7.2	Other Facility Transfer Operations 40 CFR 112.9[d][3 & 4] .....	13
3.8	Brittle Fracture Evaluation (40 CFR 112.7[i]) .....	14
3.9	Conformance with State and Local Applicable Requirements (40 CFR 112.7[j]).....	14
4.0	Facility Inspections and Training.....	15
4.1	Facility Inspections, Tests, and Records (40 CFR 112.7[e] + 40 CFR 112.9[b]) .....	15
4.1.1	Daily Informal Inspections .....	16
4.1.2	Monthly Inspection.....	16
4.1.3	Annual Inspection .....	16
4.1.4	Facility Drainage (40 CFR 112.9[b]).....	16
4.1.5	Formal Inspection (40 CFR 112.7[c]).....	17
4.2	Integrity testing (non-visual).....	18
4.3	Personnel, Training, and Discharge Prevention Procedures (40 CFR 112.7[f]) .....	18
5.0	Discharge Response .....	20
5.1	Response to a Minor Discharge .....	20
5.2	Response to a Major Discharge .....	21



5.3	Waste Disposal.....	22
5.4	Discharge Notification .....	22
5.5	Cleanup Contractors .....	23
6.0	Cross-Reference with SPCC Provisions (40 CFR 112.7) .....	24

### List of Tables

Table 1-1: Plan Review Log	4
Table 2-1: Petroleum Bulk Storage Containers	7
Table 2-2: Oil Discharge History	8
Table 3-1: Potential Discharge Volumes and Direction of Flow	9
Table 3-2: Onshore Oil Production Discharge Prevention and Containment Procedures	12
Table 3-3: Loading/Unloading Procedures	13
Table 4-1: Inspection and Testing Program	15
Table 4-2: Tank Inspection Schedule	17
Table 6-1: SPCC Regulations Cross-References	23

### Appendices

- A: Site Maps
- B: Substantial Harm Determination
- C: Forms and Checklists
  - C1: Monthly Inspection Checklists
  - C2: Annual Inspection Checklists
  - C3: Berm Drainage Checklist
  - C4: Record of Discharge Prevention Briefings and Training
  - C5: Facility Line Maintenance Program
    - C5-1: Monthly Facility Line Maintenance Program Checklist
    - C5-2: Annual Pressure/Leak Test Form
  - C6: Discharge Notification Form
  - C7: Discharge Response Equipment Inventory
- D: Agency Notification Standard Report
- E: Oil Spill Contingency Plan

## LIST OF ACRONYMS AND ABBREVIATIONS

AST	Aboveground Storage Tank
EPA	U.S. Environmental Protection Agency
NDIC	North Dakota Industrial Commission
NDDH	North Dakota Department of Health
NPDES	National Pollutant Discharge Elimination System
PE	Professional Engineer
POTW	Publicly Owned Treatment Works
SPCC	Spill Prevention, Control, and Countermeasure
STI	Steel Tank Institute
UST	Underground Storage Tank
bbl	barrels

# Spill Prevention, Control and Countermeasure Plan

## Kestrel 36-25 1H and Glaspey SWD 1 Facility

Prepared for Windridge Operating LLC.

## 1.0 Introduction and Purpose

The purpose of this Spill Prevention, Control, and Countermeasure (SPCC) Plan is to describe measures implemented by facility management staff to prevent oil discharges from occurring, and to prepare facility management staff to respond in a safe, effective, and timely manner to mitigate the impacts of a discharge. Additionally, this SPCC Plan is used as a reference for oil storage information and testing records, as a tool to communicate practices on preventing and responding to discharges with employees, as a guide to facility inspections, and as a resource during emergency response.

This Plan has been prepared to meet the requirements of Title 40, *Code of Federal Regulations*, part 112 (40 CFR part 112), and is the first version of an SPCC plan for the Kestrel 36-25 1H and Glaspey SWD 1 Facility (facility). The facility is owned and operated by Windridge Operating LLC. (Owner), hereafter referred to in this Plan as "Windridge."

It is the responsibility of the Owner to keep the SPCC Plan current, on file and available upon request by authorized officials.

The Owner must approve, sign and implement the SPCC Plan as soon as possible. The Owner is responsible for training the appropriate employees in the procedures set forth in this Plan.

## 1.1 Summary of Applicable Regulations

### 1.1.1 United States Environmental Protection Agency

The United States Environmental Protection Agency (USEPA) has established regulations for oil pollution prevention in the Code of Federal Regulations, Title 40 (40 CFR), Parts 110 through 112. The regulations require that a SPCC Plan be prepared if it could reasonably be expected that a harmful quantity of oil could be discharged into navigable waters of the United States or adjoining shorelines. The SPCC regulations apply to owners or operators of facilities that meet the following three primary criteria:

- The facility must be non-transportation related and engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing, using, or consuming oil and oil products.
- The facility must have an aggregate aboveground storage capacity greater than 1,320 gallons (excluding those tanks and oil filled equipment below 55 gallons in capacity, the capacity of a container that is "permanently closed", and the capacity of a "motive power container") or an aggregate underground storage capacity greater than 42,000 gallons (excluding those that are currently subject to all of the technical requirements of

40 CFR Part 280 or all of the technical requirements of state programs approved under 40 CFR Part 281).

- There must be reasonable expectation that, due to its location, the facility could discharge oil into or upon the navigable waters or adjoining shorelines of the United States.

The USEPA requires that a complete copy of the SPCC Plan be maintained at the nearest office since the facility is not attended at least four hours per day.

In accordance with 40 CFR 112.3(e), a complete copy of this SPCC Plan is maintained at the Windridge Corporate offices located at 518 Main Street, Boerne, Texas 78006. The offices are attended from 8:00 AM to 5:00 PM, Monday through Friday.

The facility management must make the plan available to the Regional Administrator of the USEPA for onsite review during normal working hours.

### **1.1.2 North Dakota Industrial Commission**

The North Dakota Industrial Commission established Rules Chapter 43-02-03 (Oil and Gas Conservation) to conserve the natural resources of North Dakota, to prevent waste and to provide for operation in a manner as to protect correlative rights of all owners of crude oil and natural gas. Among other requirements, the regulations provide additional tank storage, containment and spill response measures for oil production facilities.

## **1.2 Plan Review (40 CFR 112.3 and 112.5)**

### **1.2.1 Amendments by owner/operator request**

#### **Technical Amendments**

This Draft SPCC Plan is based on the proposed facility layout and operational descriptions provided by Windridge and will be updated with observations by Braun Intertec upon construction of the facility. The SPCC Plan will be reviewed and amended by the Owner, if necessary, every five years and any time there is a change in the facility design, construction, operation or maintenance that materially affects its potential for discharge. Examples of changes that may require amendment of the Plan include, but are not limited to:

- Commissioning or decommissioning of containers.
- Replacement, reconstruction, or installation of piping systems.
- Replacement, reconstruction, or movement of containers.
- Construction or demolition that might alter secondary containment structures.
- An increase in production.
- Changes of product or service.



- Revisions to standard operation, modification of testing/inspection procedures, and use of new or modified industry standards or maintenance procedures at the facility.

Amendments to the Plan made to address changes of this nature are referred to as technical amendments, and must be certified by a registered professional engineer (PE). An amendment made under this section must be prepared within six months, and implemented as soon as possible, but not later than six months following preparation of the amendment.

#### **Non-technical Amendments**

Non-technical amendments may be made by the facility owner and/or operator. Non-technical amendments include the following:

- Change in the name or contact information (i.e., telephone numbers) of individuals responsible for the implementation of this Plan.
- Change in the name or contact information of spill response or cleanup contractors.

Facility management staff must make and document the needed revisions to the SPCC Plan as soon as possible, but *no later than six months* after the change occurs.

The Windridge Operation Manager is responsible for initiating and coordinating revisions to the SPCC Plan.

#### **1.2.2 Amendments by USEPA Request**

The regulations require that a report must be sent to the USEPA Regional Administrator within 60 days of a single discharge of more than 1,000 gallons or two discharges of 42 gallons or more of oil (counting only the amount that reaches navigable water or adjoining shoreline) each from the same facility within a year. Spills greater than one barrel (42 gallons) that leave the Facility should also be reported to the North Dakota Industrial Commission - Oil and Gas Division via the 24-hour emergency hotline number (701.328.8020).

Upon review of the submitted material, the Regional Administrator may propose in writing, specific amendments to the SPCC Plan. Within 30 days of a notice, the Owner has 30 days to submit written information, views, and arguments to the proposed amendments. Upon consideration of all relevant information, the Regional Administrator must notify the Owner of any amendment required or rescind the notice. If amendments are required the Owner must amend the SPCC Plan within 30 days of the notice, unless the Regional Administrator, for good cause, specifies another date. The amended SPCC plan must be implemented as soon as possible, but no longer than six months following completion of the amendment, unless the Regional Administrator specifies another date.

### **1.3 Plan Review Log**

Scheduled reviews and Plan amendments are recorded in the Plan Review Log (Table 1-1). This log must be completed even if no amendment is made to the Plan as a result of the review. Unless a technical or administrative change prompts an earlier review of the Plan, the next scheduled review of this Plan must occur by <<Effective Date+5 years>>.

Table 1-1: Plan Review Log

Version	Date	Activity	PE certification required?	Comments	Reviewer
1.0	October 16, 2017	Draft	Yes	Initial Draft SPCC Plan	

## 1.4 Facilities, Procedures, Methods, or Equipment To Be Implemented

The installation or continuation of several facility improvements is important to the implementation of this SPCC Plan. The SPCC Plan assumes the implementation of the following facility actions:

- Conduct spill prevention training at least once each year (40 CFR 112.7[f]).
- Implement and conduct monthly and annual site inspections (40 CFR 112.7[e]).
- Prepare a site spill cleanup kit for use at the facility that includes absorbent material, booms, and other portable barriers. Locate an additional cache of spill materials at a central location. Check the spill kit inventory monthly to ensure that any used materials are replenished (40 CFR 112.7[c]).
- Post clearly visible site identification, location, and emergency contact phone numbers in a location to enable a person reporting a discharge to communicate to emergency responders.
- Implement a Facility Line Maintenance Program (FLMP) described in Section 3.7.2 and included as Appendix C-5 (40 CFR 112.9[d]).
- Numbered metal security seals will be installed on all oil access valves and access points to secure the battery of tanks (N.D. Rules Ch. 43-02-03-49).
- Implement the Oil Spill Contingency Plan (OSCP) included as Appendix E. The oil spill contingency plan (conforming to the requirements of 40 CFR 109) must be prepared to address procedures used in the event of a release from facility flow lines and intra-facility gathering lines (40 CFR 112.9[d][4][ii]).

## 1.5 Suggested Best Management Practices

The following recommendations are not required for production facilities under the SPCC rules, but are some improvements which should be considered for the facility as best management practices:

- Provide each tank with a clearly visible label showing size and contents to aid emergency responders.

- Initiate a tank maintenance and testing program using qualified persons and/or certified inspectors using applicable standards, for example API 12R1 (2008) or STI SP001 for tank batteries, or equivalent tank inspection regime.

## 2.0 General Facility Information

---

Name:	Kestrel 36-25 1H and Glaspey SWD 1 Facility
Address:	Sec. 1, T163N, R93W Burke County, North Dakota
Type:	Oil production and saltwater disposal wells and associated storage, pumping and storage equipment
Owner/Operator:	Windridge Operating LLC. 518 Main Street Boerne, TX 78006
Primary field contact:	Ren Gardner, Site Manager Cell: 701.891.9020
Alternate contact:	Lee Billingsley Cell: 210.601.1110

---

### 2.1 Facility Description (40 CFR 112.7[a][3])

Windridge operates the oil production & saltwater disposal facility and associated pumping and storage equipment. Primary activities at this facility include production of crude oil, and storage and disposal of produced water as a byproduct of petroleum production operations.

The facility produces and stores crude oil and produced water. At the Kestrel 36-15 1H wellhead, crude oil is stored in two 400-barrel ASTs and produced water in one 400-barrel AST. A heater treater separates the natural gas, produced water, and crude oil; one 300-gallon flow-through AST is associated with the heater treater. At the Glaspey SWD 1 wellhead, mixed oil and saltwater (brine) are separated into saltwater and oil. The separator holds 500 barrels, mixed oil/saltwater is stored in one 500-barrel AST, and saltwater is stored in three 500-barrel ASTs prior to being pumped into the ground.

The majority of the facility's exterior ground surface area is covered with compacted gravel. The Kestrel tank battery and heater treaters are located in the northeast portion of the facility. The Glaspey tank battery and injection well are located in the west portion of the facility. Metal berms enclose the tank batteries and heater treater areas. A compacted earthen berms enclose the flare pit and the perimeter of the production and injection pad area.

The facility operates 24 hours per day, seven days a week and 52 weeks per year. The facility is inspected on a daily basis by the Site Manager or his/her designee.

The facility is located in the northwest 1/4 of the northeast 1/4 of Section 1, Township 163 North, Range 93 West.



Figure 1 in Appendix A shows the general location of the facility including navigable waters on a U.S. Geological Survey topographic map. As required under 40 CFR 112.7(a)(3), the facility diagram (Figure 2 in Appendix A) depicts the layout of the facility, approximate facility boundaries, entrance and exit routes to the facility, location and contents of each AST, connecting piping, loading/unloading and transfer areas, spill control structures and sorbents, and the direction of surface water runoff.

The closest surface water is an unnamed wetland located across a graveled county road (108<sup>th</sup> Street NW), approximately 200 feet north of the facility. Aerial imagery indicates a culvert is present under the street, approximately 550 feet west of the facility and may receive runoff from the ditch between 108<sup>th</sup> Street NW and the Facility. Runoff south of the facility appears to flow through fields, wetlands, and intermittent streams, and could eventually reach Short Creek. As both of these surface waters flow into Canada, they both meet the definition of navigable waters of the US. There are no surface storm drains associated with the facility.

## 2.2 Bulk Storage Containers (40 CFR 112.7[a][3] and 112.9[c])

### 2.2.1 Construction (40 CFR 112.9[c][1])

The proposed heater tanks used at this facility will be constructed of steel, in accordance with industry specifications. The design and construction of each bulk storage container will be compatible with the characteristics of the oil product it contains, and with temperature and pressure conditions.

**Table 2-1: Krestrel 36-25 1H Petroleum Bulk Storage Containers**

Tank ID	Description	Location	Capacity (bbls.)	Secondary Containment	Piping
Tank 1	Crude Oil	Tank Battery Berm	400	Metal Berm (115' x 50' x 3' high)	Y
Tank 2	Crude Oil	Tank Battery Berm	400		Y
Tank 3	Produced Saltwater (Brine)	Tank Battery Berm	400		Y
Tank 4	Water/Oil Mixture (Flow-through)	Heater Treater	300 gal	Metal Berm (AA' x BB' by 3' high)	Y
Tank 5	Gas Condensate (Flow-through)	Between Tank Battery & Heater Treater	100 gal	Earthen Berm	Y

**Table 2-2: Glaspey SWD 1 Petroleum Bulk Storage Containers**

Tank ID	Description	Location	Capacity (bbls.)	Secondary Containment	Piping
Tank 6	Crude Oil	SW Tank Battery Berm	500	Metal Berm (280' x 80' x 3' high)	Y
Tank 7	Water/Oil Mixture Separator	SW Tank Battery Berm	500		Y
Tank 8	Clean Saltwater (Brine)	SW Tank Battery Berm	500		Y
Tank 9	Clean Saltwater (Brine)	SW Tank Battery Berm	500		Y
Tank 10	Clean Saltwater (Brine)	SW Tank Battery Berm	500		Y

Piping between fixed aboveground bulk storage tanks will be made of steel and will be supported to minimize stress or buried.

Miscellaneous temporary and/or portable containers may be located on the site during well development. These containers may include drums and tanks of various sizes containing fuel for generators, corrosion inhibitor, scale inhibitor, and surfactant. All temporary and/or portable containers will be provided with secondary containment.

## **2.2.2 Secondary Containment (40 CFR 112.9[c][2] & N.D. Rules Ch. 43-02-03-49, Ch. 43-02-03-53)**

Secondary containment will be provided by 3' high metal berms constructed around the AST battery and heater treater areas. Berms will be sized to contain the entire capacity of the largest single container and sufficient freeboard to contain precipitation. Per N.D. Rules Ch. 43-02-03-49 and Ch. 43-02-03-53, for facilities built after July 1, 2000, the berms surrounding oil and produced water tanks are also of sufficient dimension to contain the total capacity of the largest tank plus one day's fluid production. An allowance of 2,500 bbls excess capacity for precipitation and production will be provided in the Kestrel 36-25 1H AST battery containment area. An allowance of 11,200 bbls excess capacity for precipitation and production will be provided in the Glaspey SWD 1 battery containment area. Overflow equalizing lines will connect each crude oil storage AST within the bermed areas.

ASTs will be inspected at least monthly for deterioration and maintenance needs, including the foundation and support of each container that is on or above the surface of the ground.

## 2.3 Discharge History

Table 2-3 summarizes the facility's reportable release discharge history.

**Table 2-3: Oil Discharge History**

Description of Discharge	Corrective Actions Taken	Plan for Preventing Recurrence
1..		
2.		
3.		

Per NDCC 43-02-03-30, the NDIC must immediately be verbally notified of any onsite leak, spill, or release of crude oil, produced water, or natural gas liquid equal to one barrel or more of total volume. The online reporting form must be completed within 24 hours of discovery.

Any amount of crude oil, produced water, or natural gas liquid that leaves the well pad and could potentially impact surface or ground waters of the State must be reported to the NDDH in the same manner.

Per 40 CFR 112.1[b], a reportable release is one that discharges oil into or upon the navigable waters of the United States or adjoining shorelines, or into or upon the waters of the contiguous zone, or in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, or that may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Magnuson Fishery Conservation and Management Act). In accordance with this regulation, a reportable release has not occurred at this facility during the twelve months prior to the effective date of this SPCC Plan or its most recent amendment.



### 3.0 Discharge Prevention and Control

The following measures are implemented to minimize the potential of oil discharges during the handling, use, or transfer of oil products at the facility and the controls in place to minimize the potential of migration of oil to navigable waters of the United States in the event a discharge occurs. Oil-handling employees have received training in the proper implementation of these measures.

#### 3.1 Compliance with Applicable Requirements (40 CFR 112.7[a][1])

With the exception of any items listed in Section 1.4, this facility is designed to be in compliance with the applicable requirements of 40 CFR 112.7 [a][2] and [3] and does not use environmental equivalency to satisfy any of the requirements of those parts.

Per 40 CFR 112.9[d], this facility will utilize a flowline gathering line maintenance program to identify and control releases from buried flowlines lacking secondary containment.

#### 3.2 Spill Reporting (40 CFR 112.7[a][4])

The discharge notification form included in Appendix C6 will be completed immediately after detection of a discharge and prior to reporting a spill to the proper notification contacts. This information will be transferred to the online reporting form at: <https://www.dmr.nd.gov/oilgas/mvc/wincident/>

#### 3.3 Potential Discharge Volumes and Direction of Flow (40 CFR 112.7[b])

Table 3-1 presents expected volume, discharge rate, general direction of flow in the event of equipment failure, and means of secondary containment for different parts of the facility where oil is stored, used, or handled. The release estimates assume that releases are detected during daily Facility visits and a surface release is immediately identified during loading.

**Table 3-1: Potential Discharge Volumes and Direction of Flow**

Potential Event	Maximum volume released (gallons)	Maximum discharge rate	Direction of Flow	Secondary Containment
<b>Bulk Storage Area (Aboveground Storage Tank)</b>				
Failure of aboveground tank (collapse or puncture below product level)	21,000 gal (500 bbls)	Gradual to instantaneous	North	Metal Berm
Storage tank overfill	<<Daily production rate>>	55.0 gpm, up to tank volume	North	Metal Berm
Above-ground pipe failure	<<Daily production rate>>	500 bbls/day	North	Earthen Perimeter Berm/Sorbents
Below-ground leaking pipe or valve packing	<<Daily production rate>>	<<Daily production rate>>	North	NA
Tanker truck failure – produced water	4,200 gal (typical tanker truck volume)	Gradual (up to 100 gpm) to instantaneous	North	Earthen Perimeter Berm/Sorbents

Although drastic failure modes are shown above, the typical failure mode for this system is anticipated to be a release of up to 20 gallons in a day from a slow leak in pipe gasket or valve packing.



### 3.4 Containment and Diversionary Structures (40 CFR 112.7[c], 112.9[c][2],[4])

Methods of secondary containment at this facility include the use of a metal berm with high density polyethylene (HDPE) liner around storage tanks and flow-through process vessels, overflow equalization lines on ASTs, use of spill boxes at unloading areas, and land-based spill response (e.g., sorbents) to prevent oil from reaching navigable waters and adjoining shorelines.

For bulk storage containers listed on Tables 2-1 and 2-2 of this Plan:

- **Metal berms.** A metal berm with HDPE liner, sized to accommodate at least 110 percent of the capacity of the single largest oil or produced water AST plus adequate volume to contain one day's worth of produced fluids.
- **Spill Box.** A polyethylene spill box is present at each loading connection to contain spills made during connection/disconnection of fuel transfer hoses.
- **Sorbent material.** A field spill cleanup kit is maintained in the Site Manager's vehicle. Additional spill response materials are stored at an off-site location. The spill cleanup kit includes absorbent material, booms, and other portable barriers. The response equipment inventory for the facility is listed in Appendix C7 of this Plan. The inventory is checked monthly to ensure that any used material is replenished.
- **Overflow lines.** Oil storage ASTs are connected by over flow equalizing lines within the bermed area.

For flow-through process vessels:

- **Metal berm.** A metal berm with HDPE liner, sized to accommodate at least 110 percent of the capacity of the vessel plus one day's worth of produced fluids is constructed around the heater treater.
- **Earthen berm.** A compacted earthen berm constructed of sufficiently impervious material will be constructed around the well pad perimeter.

### 3.5 Practicability of Secondary Containment (40 CFR 112.7[d])

Facility management has determined that additional secondary containment is not practical at this facility. The integrity of buried flowlines will be monitored as described in Section 3.7.2. by Windridge, which has developed a Facility Line Maintenance Program, included in Appendix C5. The Facility Oil Spill Contingency Plan is included in Appendix E.

### 3.6 Oil Production Facility Drainage Requirements (40 CFR 112.9[b])

The potential for discharges during onshore oil production operations exists at this facility. Facility management is committed to ensuring the operations of this facility comply with the facility drainage inspection and maintenance requirements and will document drainage activities on the monthly and berm drainage inspection checklists included as Appendices C1 and C3, respectively.

The following discharge prevention and containment procedures are implemented to prevent oil discharges during onshore oil production operations.

**Table 3-2: Onshore Oil Production Discharge Prevention and Containment Procedures**

Stage	Tasks
Facility Drainage	<ul style="list-style-type: none"> <li>▪ Prior to draining, inspect the bermed area and take appropriate action including removing accumulated oil on the rainwater and returning it to storage or disposing of it in accordance with legally approved methods.</li> <li>▪ Inspect field drainage systems and oil traps, sumps, or skimmers at regularly scheduled intervals for oil accumulation. Promptly remove any accumulations of oil.</li> <li>▪ Maintain record of bermed area drainage events.</li> </ul>
Bulk Oil Storage Containers	<ul style="list-style-type: none"> <li>▪ Use oil storage containers of appropriate construction for the material stored and the conditions of storage. <ul style="list-style-type: none"> <li>▪ Construct all tank battery, separation, and treating facility installations with a secondary means of containment for the entire capacity of the largest single container, one day's worth of produced fluids, and sufficient freeboard to contain precipitation.</li> </ul> </li> <li>▪ Periodically and upon a regular schedule visually inspect each container of oil for deterioration and maintenance needs, including the foundation and support of each container that is on or above the surface of the ground.</li> <li>▪ Engineer/update tanks in accordance with good engineering practices to prevent discharge</li> </ul>

### **3.6.1 Produced Water Containers Oil/Water Separation (40 CFR 112.9[c][1-4])**

Additional requirements for oil separation and additional inspections do not apply as produced water containers are constructed of material compatible with their contents, located within a secondary containment area and are subject to regular inspections. All produced water containers are periodically and regularly visually inspected for deterioration and maintenance needs, including the foundation and support of each container that is on or above the surface of the ground.

## **3.7 Tank Truck Loading/Unloading Rack Requirements (40 CFR 112.7[h])**

The potential for discharges during tank truck loading and unloading operations and other facility transfer operations exists at this facility. Facility management is committed to ensuring the safe transfer of material to and from storage tanks. The following measures are implemented to prevent oil discharges during tank truck loading and unloading and other facility transfer operations.

### **3.7.1 Loading/Unloading Procedures (40 CFR 112.7[h][2] and [3])**

All haulers must meet the minimum requirements and regulations for tank truck loading/unloading established by the U.S. Department of Transportation. Facility management takes care that the vendor understands the site layout, knows the protocol for entering the facility and unloading product, and has the necessary equipment to respond to a discharge from the vehicle or fuel transfer hose.

All loading of tank vehicles takes place only in the designated loading area and all loading activities are supervised at all times by the truck operator.



**Table 3-3: Loading/Unloading Procedures**

Stage	Tasks
Prior to loading	<ul style="list-style-type: none"> <li>Visually check all hoses for leaks and wet spots.</li> <li>Verify that sufficient volume (ullage) is available in the storage tank or truck.</li> <li>Ensure that the vehicle's parking brakes are set.</li> <li>Verify proper alignment of valves and proper functioning of the pumping system.</li> <li>Establish adequate bonding/grounding prior to connecting to the fuel transfer point.</li> </ul>
During loading	<ul style="list-style-type: none"> <li>Driver must maintain visual contact with unloading operation all times.</li> <li>Periodically inspect all systems, hoses and connections.</li> <li>When making a connection, shut off the vehicle engine. When transferring Class 3 materials, shut off the vehicle engine unless it is used to operate a pump.</li> <li>Maintain communication with the pumping and receiving stations.</li> <li>Monitor the liquid level in the tanker to prevent overflow.</li> <li>Monitor flow meters to determine rate of flow.</li> <li>When topping off the tank, reduce flow rate to prevent overflow.</li> </ul>
After loading	<ul style="list-style-type: none"> <li>Make sure the transfer operation is completed.</li> <li>Close all tank and loading valves before disconnecting.</li> <li>Securely close all vehicle internal, external, and valves before disconnecting.</li> <li>Secure all hatches.</li> <li>Disconnect grounding/bonding wires, if present.</li> <li>Make sure the hoses are drained to remove the remaining oil before moving them away from the connection. Use a spill box.</li> <li>Cap the end of the hose and other connecting devices before moving them to prevent uncontrolled leakage.</li> <li>Inspect the lowermost drain and all outlets on tank truck prior to departure. If necessary, tighten, adjust, or replace caps, valves, or other equipment to prevent oil leaking while in transit.</li> </ul>

### 3.7.2 Other Facility Transfer Operations 40 CFR 112.9[d][3 & 4]

Per 112.9[d](3), flowlines and intra-facility gathering lines, including buried lines, that do not have secondary containment must include:

- An Oil Spill Contingency Plan following the provisions of 40 CFR 109.
- A written commitment of manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged that might be harmful.
- A written flowline/intra-facility gathering line maintenance program.

A copy of the facility Oil Spill Contingency Plan is included as Appendix E.

This facility has prepared and will implement a Facility Line Maintenance Program, a program of flowline/intra-facility gathering line maintenance. The maintenance program addresses the procedures to:

- Ensure that flowlines and intra-facility gathering lines and associated valves and equipment are compatible with the type of production fluids, their potential corrosivity, volume, and pressure, and other conditions expected in the operational environment.

- Visually inspect and/or test flowlines and intra-facility gathering lines and associated appurtenances on a periodic and regular schedule for leaks, oil discharges, corrosion, or other conditions that could lead to a discharge as described in §112.1(b). For flowlines and intra-facility gathering lines that are not provided with secondary containment in accordance with §112.7(c), the frequency and type of testing must allow for the implementation of a contingency plan as described under part 109 of this chapter.
- Take corrective action or make repairs to any flowlines and intra-facility gathering lines and associated appurtenances as indicated by regularly scheduled visual inspections, tests, or evidence of a discharge.
- Promptly remove or initiate actions to stabilize and remediate any accumulations of oil discharges associated with flowlines, intra-facility gathering lines, and associated appurtenances.

Appendix C5 contains the Windridge Facility Line Maintenance Program.

### **3.8 Brittle Fracture Evaluation (40 CFR 112.7[i])**

All of the tanks at the facility are shop-built. As such, the requirements of 40 CFR 112.7[i] for brittle fracture evaluation or catastrophic failure analysis for field-erected tanks do not apply.

### **3.9 Conformance with State and Local Applicable Requirements (40 CFR 112.7[j])**

The tanks will meet current NFPA code requirements as enforced by the State Fire Marshall. The following requirements of North Dakota Century Code (NDCC) 43-02-03 will be implemented at the facility:

- Numbered metal security seals will be installed on all oil access valves and access points to secure the battery of tanks (NDCC 43-02-03-49).
- Dikes will be erected around oil tanks and production equipment at any new production facility prior to completing any well. Within 180 days from the date the operator is notified by the commission, a perimeter berm, at least six inches in height, must be constructed of sufficiently impermeable material to provide emergency containment and to divert surface drainage away from the site around all storage facilities and production sites that include storage tanks, have a daily throughput of more than one hundred barrels of fluid per day, and include production equipment or load lines that are not contained within secondary containment dikes (NDCC 43-02-03-49).



## 4.0 Facility Inspections and Training

### 4.1 Facility Inspections, Tests, and Records (40 CFR 112.7[e] + 40 CFR 112.9[b])

As required by the SPCC rule, facility management will perform the inspections, tests, and evaluations listed in the following table. Table 4-1 summarizes the various types of inspections and tests performed at the facility. The inspections and tests are described later in this section, and in the respective sections that describe different parts of the facility (e.g., Section 2.2 for bulk storage containers).

**Table 4-1: Inspection and Testing Program**

Facility Component	Action	Frequency/Circumstances
Tank batteries, separation, above-ground pipe, and below-ground flowline equipment [40 CFR 112.7(e)]	Visually inspect containment areas and equipment for indications of a major release.	<ul style="list-style-type: none"> <li>Daily</li> </ul>
Aboveground containers [40 CFR 112.7(e)] [112.9(c3)], including oil, produced water and heater treater vessels.	Visually inspect container integrity. Inspect outside of container for signs of deterioration and discharges.	<ul style="list-style-type: none"> <li>Monthly</li> <li>Annual</li> <li>Following material repairs</li> </ul>
Container supports and foundation [112.9(c3)]	Inspect container's supports and foundations.	<ul style="list-style-type: none"> <li>Monthly</li> <li>Annual</li> <li>Following material repairs</li> </ul>
Lowermost drain and all outlets of tank truck [112.7(h)]	Visually inspect.	<ul style="list-style-type: none"> <li>Prior to filling and departure</li> </ul>
All aboveground valves, piping, and appurtenances [112.9(c3)]	Visual inspection of general condition of items, such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces.	<ul style="list-style-type: none"> <li>Monthly</li> </ul>
Tank batteries, separation, and treating areas [112.9(b)]	Prior to drainage, inspect the diked area and remove and appropriately dispose of accumulated oil.	<ul style="list-style-type: none"> <li>Prior to drainage</li> </ul>
Field drainage systems, oil traps, sumps, or skimmers [112.9(b2)]	Inspect for an accumulation of oil that may have resulted from any small discharge and appropriately dispose of accumulated oil.	<ul style="list-style-type: none"> <li>Monthly</li> <li>Annual</li> <li>Following material repairs</li> </ul>
Flow-through process vessels and associated components (such as dump valves) [112.9(c5)]	Visually inspect and/or test for leaks, corrosion, or other conditions that could lead to a discharge.	<ul style="list-style-type: none"> <li>Monthly</li> <li>Annual</li> <li>Following material repairs</li> </ul>
Aboveground valves and piping associated with transfer operations [112.9(d)]	Visually inspect flange joints, valve glands and bodies, spill box, pipe supports, pumping well polish rod stuffing boxes, bleeder and gauge valves.	<ul style="list-style-type: none"> <li>Monthly</li> <li>Annual</li> <li>Following material repairs</li> </ul>
Flowlines and intra-facility gathering lines and associated appurtenances [112.9(d)]	Visually inspect for leaks, oil discharges, corrosion, or other conditions that could lead to a discharge.	<ul style="list-style-type: none"> <li>Monthly</li> <li>Annual</li> <li>Following material repairs</li> </ul>

#### **4.1.1 Daily Informal Inspections**

Windridge personnel utilize the areas where the tanks are located on a regular basis, and therefore problems with the tanks would likely be discovered before the formal inspections.

#### **4.1.2 Monthly Inspection**

The checklists provided in Appendix C1 and C5-1 will be used for monthly inspections by facility personnel. The monthly inspections cover the following key elements:

- Observing the exterior of aboveground storage tank, valves, pipes, and other equipment for signs of deterioration, leaks, corrosion, and thinning.
- Observing tank foundations and supports for signs of instability or excessive settlement.
- Observing the tank fill and discharge pipes for signs of poor connection that could cause a discharge, and tank vent for obstructions and proper operation.
- Verifying the proper functioning of overfill prevention systems.
- Checking the inventory of discharge response equipment and restocking as needed.
- Inspecting all aboveground valves and piping associated with transfer operations for the general condition of flange joints, valve glands and bodies, spill boxes, pipe supports, pumping well polish rod stuffing boxes, bleeder and gauge valves, and other such items.
- Inspecting the areas in the vicinity of the routes over buried piping runs for surface indications of a piping release.

All problems regarding tanks, valves, piping, containment, or response equipment must immediately be reported to the Windridge Site Manager. Visible oil leaks from tank walls, piping, or other components must be repaired as soon as possible to prevent a larger spill or a discharge to navigable waters or adjoining shorelines. Pooled oil is removed immediately upon discovery.

Written monthly inspection records will be signed by the Windridge Site Manager and maintained with this SPCC Plan for a period of three years.

#### **4.1.3 Annual Inspection**

Facility personnel perform a slightly more thorough inspection of facility equipment on an annual basis. This annual inspection complements the monthly inspection described above and will be performed annually using the checklist provided in Appendix C2 of this Plan.

Written annual inspection records will be signed by the Windridge Site Manager and maintained with this SPCC Plan for a period of three years.

#### **4.1.4 Facility Drainage (40 CFR 112.9[b])**

Secondary containment in the form of a metal berm is present at the tank battery and separation and treating area and the berm is adequately sized to contain a release of the stored material until cleanup



occurs. The berm is not outfitted with drains and is manually drained of uncontaminated water when accumulations threaten the integrity of the berm. Spill boxes are located at all loading connections, which are located within secondary containment associated with the tank battery.

During the daily Inspections nearby field drainage systems (such as drainage ditches or road ditches) and oil traps, sumps, or skimmers, are examined for an accumulation of oil that may have resulted from any small discharge. Accumulations of oil are promptly cleaned up.

Records (including approximate volume and presence/absence of floating oil) will be kept of each drainage event. Prior to drainage of the bermed area, the area will be inspected and floating oil skimmed off the water surface and returned to storage.

Potential discharges from ASTs are restrained by the bermed area. Discharges occurring during loading/unloading operations are contained by the spill box at the loading connection and by use of sorbents and spill equipment carried on the fuel transportation truck. Appendix C3 includes a berm drainage checklist.

#### 4.1.5 Formal Inspection (40 CFR 112.7[c])

Windridge follows a bulk storage tank inspection program for shop-fabricated steel tanks which is based on the Steel Tank Institute Standard SP001, "Standard for Inspection of Aboveground Storage Tanks." The following table describes the inspection program.

**Table 4-2 Tank Inspection Schedule<sup>a</sup>**

Tank Sizes	Spill Control & CRDM Present	Spill Control Present, No CRDM Present	Neither Spill Control nor CRDM Present
<1,100 gallons (26.2 bbls)	Periodic inspections	Periodic inspections	Periodic inspections External inspection & leak test every 10 yrs
1,100 – 5,000 gallons (26.2 – 119 bbls)	Periodic inspections	Periodic inspections External inspection & leak test every 10 yrs	Periodic inspections Formal external inspection by certified inspector every 10 yrs
5,000 – 30,000 gallons (119 – 714 bbls)	Periodic inspections Formal external inspection by certified inspector every 20 yrs	Periodic inspections External inspection (5 yrs) & leak test (10 yrs) –or– External inspection (10 yrs) & internal inspection (20 yrs)	Periodic inspections External inspection & leak test (5 yrs) and Internal inspections (10 yrs) –or– Leak test (annual) and External inspection (5 yrs)
30,001 – 50,000 gallons (714 – 1190 bbls)	Periodic inspections Formal external inspection by certified inspector every 20 yrs	Periodic inspections External inspection and leak tests every 5 years. Internal inspections every 15 years.	Periodic inspections External inspection and leak tests every 5 years. Internal inspections every 10 years.

<sup>a</sup> Adapted from Steel Tank Institute Standard SP001

Note all tanks sizes and types are subject to periodic inspections.

Continuous release detection method (e.g. a complete visual inspection of all outside tank surfaces, such as for elevated tanks, double wall or double bottom tanks) requires an assurance that any fluid collecting on the liner, under the tanks can be observed. This can be accomplished by constructing a sump within any material that covers the liner, so that any accumulated fluid can be directly observed. Spill control, in the form of a secondary containment berm, is also present.

If visible observation of the liner for accumulated fluids is maintained, along with the containment berms, formal inspections external inspections will begin 20 years from the date of the tank installation.

For containers that are single-use and for dispensing only (i.e., the container is not refilled), EPA recognizes that industry standards typically require only periodic visual examination by the owner/operator. Since these containers are single-use, internal or comparative integrity testing for corrosion is generally not appropriate because the containers are not maintained on site for a long enough period of time that degradation and deterioration of the container's integrity might occur. Empty single-use containers (e.g., 55-gallon drums, 275 gallon totes) typically are returned to the vendor, recycled, or disposed of in accordance with applicable regulations.

## 4.2 Integrity testing (non-visual)

Windridge tests each bulk storage tank for integrity at a minimum of once every twenty years and whenever material repairs are made to the tank in accordance with the STI SP001 standard.

Integrity testing consists of frequent visual inspections (see above), combined with another testing technique, which will typically be ultrasonic but may also be hydrostatic, radiographic, acoustic, or another system of non-destructive shell testing. The testing includes the tanks supports and foundation. Comparison records of each inspection are maintained at Windridge corporate headquarters.

EPA has also determined that for well-designed shop-built containers with a shell capacity of 30,000 gallons or under, visual inspection plus elevation of the container which makes all sides of the container, including the bottom, visible during inspection (e.g., where the containers are mounted on structural supports, saddles, or some forms of grillage) would be considered "equivalent" to non-destructive shell testing (based on P.E.'s approval)<sup>[1]</sup>. Secondary containment requirements still apply to these tanks.

## 4.3 Personnel, Training, and Discharge Prevention Procedures (40 CFR 112.7[f])

The Windridge Site Manager is the facility designee and is responsible for oil discharge prevention, control, and response preparedness activities at this facility.

Facility management has been responsible for arranging instruction of oil-handling facility personnel in the operation and maintenance of oil pollution prevention equipment, discharge procedure protocols, applicable pollution control laws, rules and regulations, general facility operations, and the content of

---

<sup>[1]</sup> M. Horinko (USEPA) to D. Gilligan, PMAA, undated reference on EPA website: [http://www.epa.gov/oem/docs/oil/spcc/PMAA\\_letter.pdf](http://www.epa.gov/oem/docs/oil/spcc/PMAA_letter.pdf)



this SPCC Plan. Any new facility personnel with oil-handling responsibilities are provided with this same training prior to being involved in any oil operation.

Annual discharge prevention briefings will be held by the Windridge Site Manager for all facility personnel involved in oil operations. The briefings will be aimed at ensuring continued understanding and adherence to the discharge prevention procedures presented in the SPCC Plan. The briefings also highlight and describe known discharge events or failures, malfunctioning components, and recently implemented precautionary measures and best practices. Facility operators and other personnel will have the opportunity during the briefings to share recommendations concerning health, safety, and environmental issues encountered during facility operations.

Records of the briefings and discharge prevention training will be included in Appendix C4 of this SPCC Plan and retained for a period of three years.

## 5.0 Discharge Response

This section describes the response and cleanup procedures in the event of an oil discharge. The uncontrolled discharge of oil to groundwater, surface water, or soil is prohibited by state and possibly federal laws. Immediate action must be taken to control, contain, and recover discharged product.

In general, the following steps are taken:

- Eliminate potential spark sources.
- Determine the source of the leak.
- Take corrective action to stop the leak if possible (i.e. upright container, plug hole, etc).
- Contain the discharge with sorbents, berms, fences, trenches, sandbags, or other material.
- Contact the Windridge Site Manager or his alternate.
- Contact regulatory authorities and the response organization.
- Collect and dispose of recovered products according to regulation.

For the purpose of establishing appropriate response procedures, this SPCC Plan classifies discharges as either “minor” or “major,” depending on the volume and characteristics of the material released.

A list of Emergency Contacts is provided on the front page of this document.

A guide to response, control and recovery actions is included in the Oil Spill Contingency Plan, Appendix E.

### 5.1 Response to a Minor Discharge

A “minor” discharge is defined as one that poses no significant harm (or threat) to human health and safety or to the environment. Minor discharges are generally those where:

- The quantity of product discharged is small (e.g., may involve less than 1 barrel of oil).
- Discharged material is easily stopped and controlled at the time of the discharge.
- Discharge is localized near the source.
- Discharged material did not leave the well pad.
- There is little risk to human health or safety.
- There is little risk of fire or explosion.

Minor discharges can usually be cleaned up by facility personnel. The following guidelines apply:

- Immediately notify the Windridge Site Manager.
- Under the direction of the Windridge Site Manager, contain the discharge with discharge response materials and equipment. Place discharge debris in properly labeled waste containers.
- The Windridge Site Manager will complete the discharge notification form (Appendix C6) and attach a copy to this SPCC Plan.

## 5.2 Response to a Major Discharge

A “major” discharge is defined as one that cannot be safely controlled or cleaned up by facility personnel or requires notice to regulatory agencies, such as when:

- The discharge exceeds one barrel (42 gallons).
- The discharge is large enough to spread off of the well pad.
- The discharged material enters surface or ground water.
- The discharge requires special equipment or training to clean up.
- The discharged material poses a hazard to human health or safety.
- There is a danger of fire or explosion.

In the event of a major discharge, the following guidelines apply:

- If the Windridge Site Manager is not present at the facility, the senior on-site person notifies the Windridge Site Manager of the discharge and has authority to initiate notification and response.
- The Windridge Site Manager (or senior on-site person) must call for medical assistance if workers are injured.
- The Windridge Site Manager (or senior on-site person) must notify the Fire Department or Police Department.
- The Windridge Site Manager (or senior on-site person) must call the spill response and cleanup contractors listed in the Emergency Contacts list on the front page of this document.
- If the discharge involves than one barrel (42 gallons) of produced fluids such as crude oil, water, or oil/water emulsion before these materials are trucked off-site or enter a crude transportation pipelined, the Windridge Site Manager will call the North Dakota Industrial Commission – Oil and Gas Division at 701-328-8020 and complete the online notification form found at <https://www.dmr.nd.gov/oilgas/mvc/wincident/>. A copy of the submitted report shall be attached to this SPCC Plan.
- If the discharge involves a release that extends off of the well pad or is not exempt under the RCRA oilfield exemptions, including spills that may potentially human health or safety, waters of the state, either surface water or groundwater, or other impacts to the environment, the Windridge Site Manager will call the North Dakota Department of Health – Environmental Health Section at 701-328-5210 and complete the online notification form found at <https://www.dmr.nd.gov/oilgas/mvc/wincident/>. A copy of the submitted report shall be attached to this SPCC Plan.
- This includes releases of crude oil or produced liquids from truck transports or transportation pipelines.



- The Windridge Site Manager (or senior on-site person) must immediately contact the North Dakota Industrial Commission – Oil and Gas Division at 701-328-8020 and the National Response Center at 800-424-8802.
- The Windridge Site Manager (or senior on-site person) must record the call on the Discharge Notification form in Appendix C6
- The Windridge Site Manager (or senior on-site person) coordinates cleanup and obtains assistance from a cleanup contractor or other response organization as necessary.

If the Windridge Site Manager is not available at the time of the discharge, then the next highest person in seniority assumes responsibility for coordinating response activities.

### 5.3 Waste Disposal

Wastes resulting from a minor discharge response will be containerized in impervious bags, drums, or buckets. The Windridge Site Manager will characterize the waste for proper disposal and ensure that it is removed from the facility by a licensed waste hauler within two weeks. Upon approval by the Director of Oil and Gas of the Industrial Commission (or their designated representatives), remediation of the material may be accomplished at the Facility.

Wastes resulting from a major discharge response will be removed and disposed of by Windridge Field Staff as directed by the Windridge Site Manager, or by a cleanup contractor.

### 5.4 Discharge Notification

Any size discharge (i.e., one that creates a sheen, emulsion, or sludge) that affects or threatens to affect navigable waters or adjoining shorelines must be reported immediately to the National Response Center (1-800-424-8802). The Center is staffed 24 hours a day.

A summary sheet is included in Appendix C6 to facilitate reporting to <https://www.dmr.nd.gov/oilgas/mvc/wincident/>.

The person reporting the discharge must provide the following information:

- Name, location, organization, and telephone number
- Name and address of the party responsible for the incident
- Date and time of the incident
- Location of the incident
- Source and cause of the release or discharge
- Types of material(s) released or discharged
- Quantity of materials released or discharged
- Danger or threat posed by the release or discharge
- Number and types of injuries (if any)
- Media affected or threatened by the discharge (i.e., water, land, air)
- Weather conditions at the incident location
- Any other information that may help emergency personnel respond to the incident



Contact information for reporting a discharge to the appropriate authorities is listed in Appendix C6 and will be carried by the Windridge Site Manager.

In addition to the above reporting, 40 CFR 112.4 requires that information be submitted to the United States Environmental Protection Agency (EPA) Regional Administrator and the appropriate state agency in charge of oil pollution control activities (see contact information on the report cover) whenever the facility discharges (as defined in 40 CFR 112.1[b]) *more than 1,000 gallons of oil in a single event*, or discharges (as defined in 40 CFR 112.1[b]) *more than 42 gallons of oil in each of two discharge incidents within a 12-month period*.

The following information must be submitted to the EPA Regional Administrator and to the North Dakota Industrial Commission – Oil and Gas Division within 60 days:

- Name of the facility
- Name of the owner/operator
- Location of the facility
- Maximum storage or handling capacity and normal daily throughput
- Corrective action and countermeasures taken, including a description of equipment repairs and replacements
- Description of facility, including maps, flow diagrams, and topographical maps
- Cause of the discharge(s) to navigable waters and adjoining shorelines, including a failure analysis of the system and subsystem in which the failure occurred
- Additional preventive measures taken or contemplated to minimize possibility of recurrence
- Other pertinent information requested by the Regional Administrator

A standard report for submitting the information to the EPA Regional Administrator and to the North Dakota Industrial Commission – Oil and Gas Division is included in Appendix D of this Plan.

## 5.5 Cleanup Contractors

Contact information for specialized spill response and cleanup contractors are provided on the front page of this document. These contractors have the necessary equipment to respond to a major discharge of oil. A portable spill kit is located with the Site Manager and a larger kit is maintained at a central repository location for rapid mobilization to the site. The inventory of the materials to be kept on hand in the spill kit is provided in Appendix C7 of this Plan. The inventory will be verified on a monthly basis.

## 6.0 Cross-Reference with SPCC Provisions (40 CFR 112.7)

This SPCC Plan does not follow the exact order presented in 40 CFR Part 112. Section headings identify, where appropriate, the relevant section(s) of the SPCC rule. Table 1-2 presents a cross-reference of Plan sections relative to applicable parts of 40 CFR Part 112.

**Table 6-1: SPCC Regulations Cross-References**

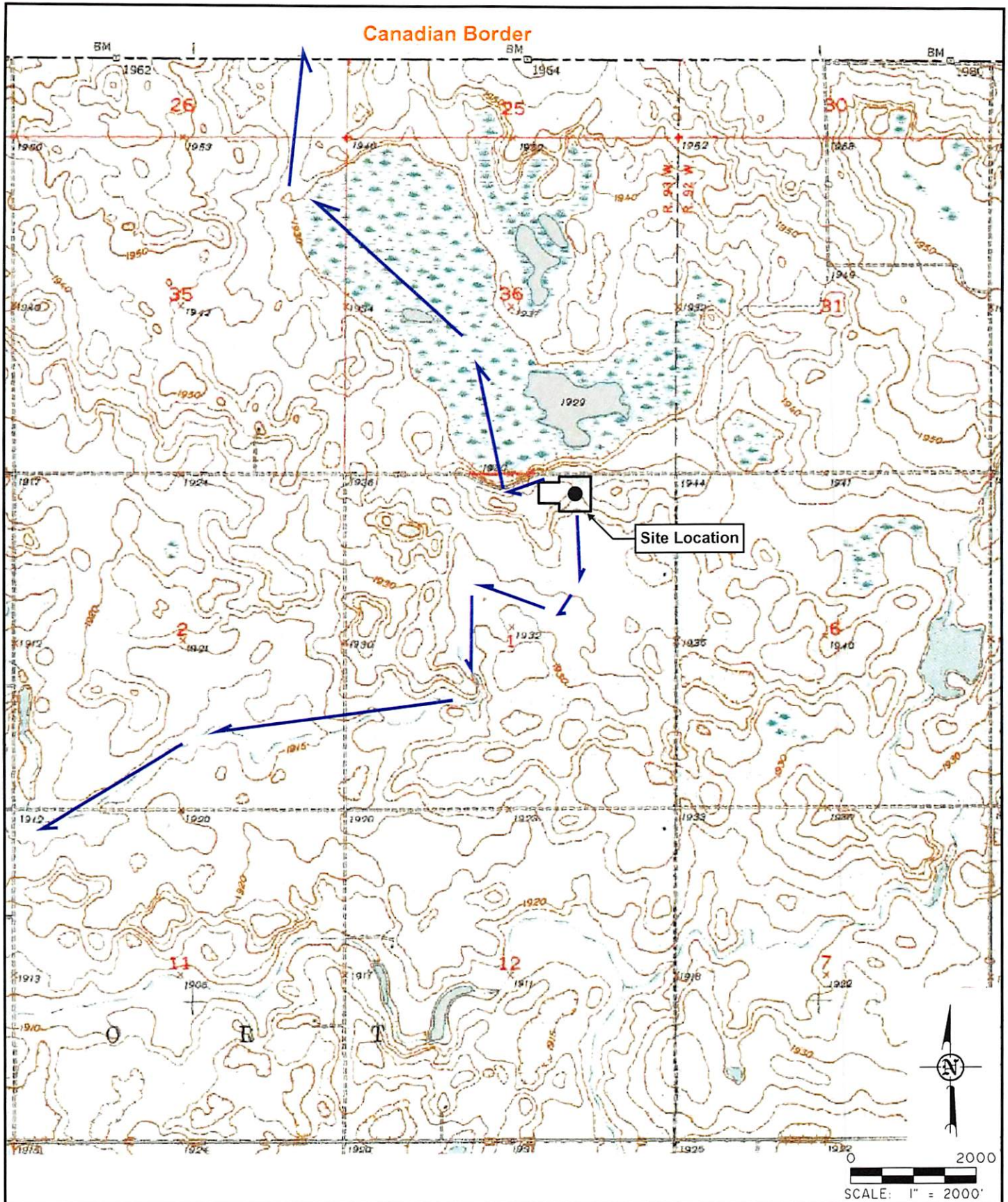
Provision	Description	Section
112.3(d)	Professional Engineer Certification	Certification Page
112.3(e)	Location of SPCC Plan	1.1
112.5	Plan Review	1.2, 1.3 Table 1-1
112.7	Management Approval	Certification Page
112.7	Cross-Reference with SPCC Rule	Table 6-1
112.7(a)(3)	Facility Description Site Plan Contact List	2.0, 2.1, 2.2 Appendix A Cover Page
112.7(a)(4)	Spill Reporting	3.2 Appendix C7
112.7(a)(5)	Discharge Response	5.0 Appendix C
112.7(b)	Potential Discharge Volumes and Direction of Flow	3.3 Table 3.1
112.7(c)	Containment and Diversionary Structures	3.4
112.7(d)	Practicability of Secondary Containment	3.5
112.7(e)	Inspections, Tests, and Records	4.1 Appendix C
112.7(f)	Personnel, Training and Discharge Prevention Procedures	4.2
112.7(h)	Tank Truck Loading/Unloading and Other Facility Transfer Operations	3.7
112.7(i)	Brittle Fracture Evaluation	3.8
112.7(j)	Conformance with Applicable State and Local Requirements	3.9
112.9(b)	Oil Production Facility Drainage Requirements	3.6
112.9(c)	Oil Production Bulk Storage Containers	2.2
112.9(c)(4)	Containment and Diversionary Structures	3.4
112.9(c)(6)(i)	Produced Water Containers Oil/Water Separation	3.6.1
112.9(d)	Facility Transfer Operations	3.7
112.20(e)	Certification of Substantial Harm Determination	Appendix A

\* Only selected excerpts of the relevant rule text are provided. For a complete list of SPCC requirements, refer to the full text of 40 CFR Part 112.

## **Appendix A**

### **Site Maps**





**BRAUN**  
**INTERTEC**  
The Science You Build On.

Windridge Operation LLC  
Kestrel 36-25 1H & Glaspey SWD 1  
Sec. 1, T163N, R93W  
Burke Co, North Dakota

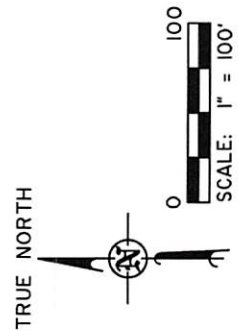
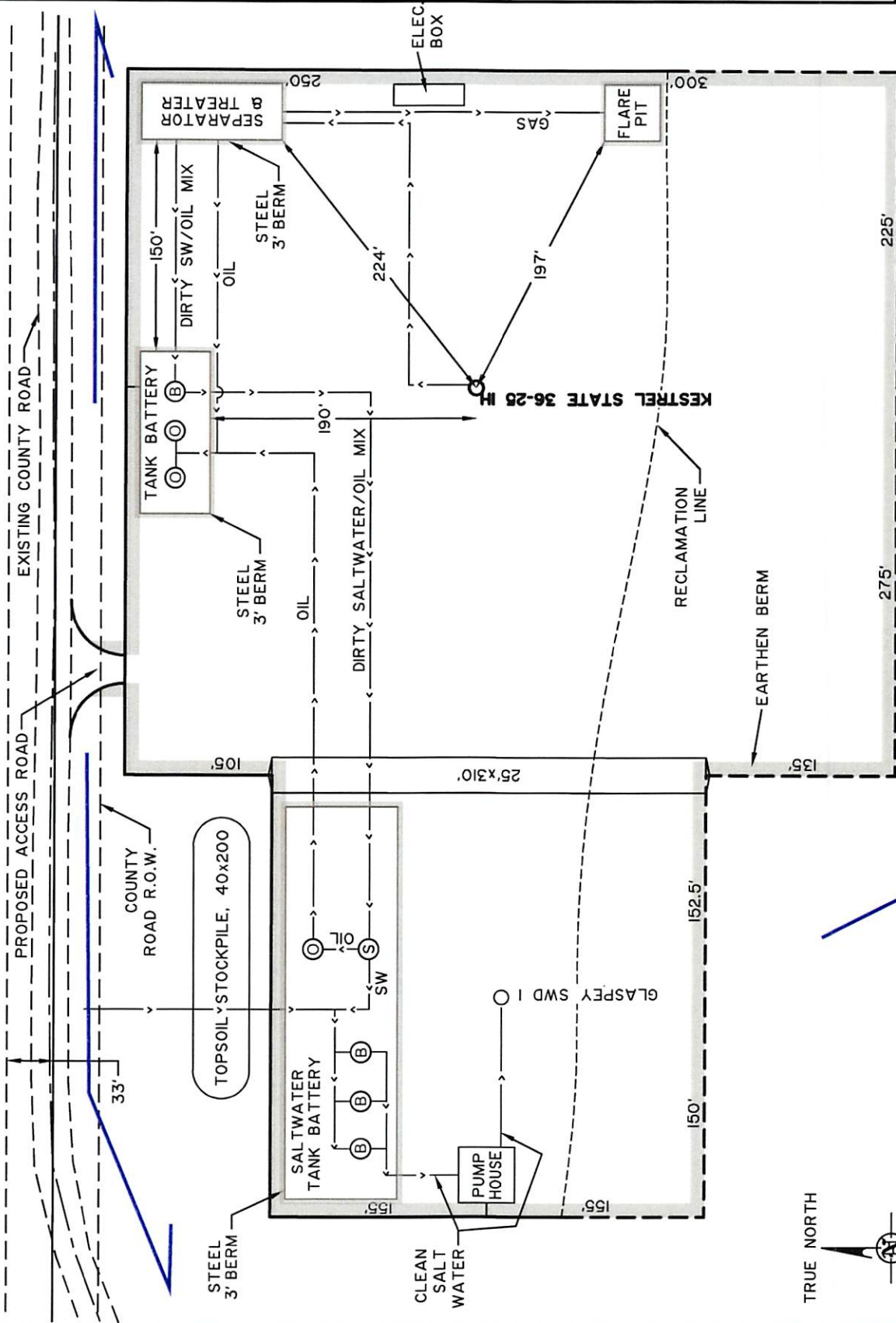
**Figure 1:**  
**Site Location**

Drawn By: JCM  
Reviewed By: JRK  
Project #: B170477  
Scale: 1" = 2,000'



**Figure 2:**  
**Site Layout**

Drawn By: JCM  
Reviewed By: JRK  
Project #: B1710477  
Scale: N/A



## Appendix B

### Substantial Harm Determination

Facility Name: Kestrel 36-25 1H and Glaspey SWD 1 Facility  
Facility Address: Section 1, T163N, R93W, Burke County, North Dakota

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?  
Yes ☐ No ☒
2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground storage tank area?  
Yes ☐ No ☒
3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in 40 CFR part 112 Appendix C, Attachment C-III or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?  
Yes ☐ No ☒
4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in 40 CFR part 112 Appendix C, Attachment C-III or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake?  
Yes ☐ No ☒
5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?  
Yes ☐ No ☒

### Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

## **APPENDIX C**

### **Facility Inspection Checklists**

The following checklists are used for monthly and annual facility-conducted inspections. Completed checklists must be signed by the inspector and maintained at the facility, with this SPCC Plan, for at least three years.

- C1: Monthly Inspection Checklists
- C2: Annual Inspection Checklists
- C3: Berm Drainage Checklist
- C4: Record of Discharge Prevention Briefings and Training
- C5: Facility Line Maintenance Program
  - C5-1: Monthly Facility Line Maintenance Program Checklist
  - C5-2: Annual Pressure/Leak Test Form
- C6: Discharge Notification Form
- C7: Discharge Response Equipment Inventory

## Appendix C1

### Monthly Inspection Checklist

Inspection Date: \_\_\_\_\_  
 Facility Name: Kestrel 36-25 1H and Glaspey SWD 1  
 Facility Address: Section 1, T163N, R93W, Burke County, North Dakota

Inspections are to be performed monthly by qualified personnel via a thorough visual inspection of the facility and appropriate oil storage areas.

#### Inspection Procedures

Only key personnel with SPCC training shall conduct monthly inspections.  
 Inspections shall be conducted during sufficient light conditions and necessary equipment (ladders, flashlights, safety gear) shall be provided to allow inspection of difficult to access areas.  
 Results of the inspections are to be documented on the following form or equivalent abnormalities shall be clearly stated on the form and the facility manager shall be notified.

Each inspection form shall be signed by the inspector, or facility manager, and maintained with the SPCC Plan for a minimum of three years.

	Y*	N	Description & Comments
<b>Storage tanks (including produced water containers)</b>			
<i>Tank surfaces show signs of leakage</i>			
<i>Tanks are damaged, rusted or deteriorated</i>			
<i>Bolts, rivets, or seams are damaged</i>			
<i>Tank supports are deteriorated or buckled</i>			
<i>Tank foundations have eroded or settled</i>			
<i>Level gauges &lt;or alarms, if present&gt; are inoperative</i>			
<i>Vents are obstructed</i>			
<i>Overflow equalization lines are damaged or inoperative</i>			
<i>Secondary containment is damaged or stained</i>			
<i>Free phase oil present in secondary containment</i>			
<b>Piping/Overflow lines</b>			
<i>Valve seals, gaskets, or other appurtenances are leaking</i>			
<i>Valves are damaged, rusted, or deteriorated</i>			
<i>Pipelines or supports are damaged, rusted, or deteriorated</i>			
<i>Joints, valves and other appurtenances are leaking</i>			
<i>Fill and discharge pipes are properly sealed</i>			
<i>Buried piping is exposed</i>			
<b>Loading and transfer equipment</b>			
<i>Transfer equipment (flange joints, valve glands and bodies, drip pans, pip supports, pumping well polish rod stuffing boxes, bleeder and gauge valves, etc.) damaged.</i>			
<i>Loading/unloading rack is damaged or deteriorated</i>			
<i>Connections are not capped or blank-flanged</i>			
<i>Secondary containment is damaged or stained</i>			



**Monthly Inspection Checklist**  
**Kestrel 36-25 1H Facility**

Page 2

<b>Flow through process vessels</b>			
<i>Signs of leakage</i>			
<i>Signs of corrosion or rust</i>			
<b>Earthen Berms</b>			
<i>Erosion/Settling</i>			
<i>Dead or Dying Vegetation</i>			
<i>Ponding Surface Water</i>			
<i>Accumulated Product</i>			
<i>Cracks or Stress</i>			
<b>Steel Berms</b>			
<i>Settling</i>			
<i>Dead or Dying Vegetation</i>			
<i>Ponding Surface Water</i>			
<i>Accumulated Product</i>			
<i>Damage or Stress</i>			
<b>Field drainage</b>			
<i>Oil traps, skimmers, sumps require accumulated oil removal</i>			
<b>Spill Kit</b>			
<i>Spill kit inventory is incomplete? If not restock accordingly</i>			
<b>Abnormalities reported to Designated Management Representative?</b>			

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

## APPENDIX C2

### Annual Facility Inspection Checklist

Inspection Date: \_\_\_\_\_  
 Facility Name: Kestrel 36-25 1H and Glaspey SWD 1 Facility  
 Facility Address: Section 1, T163N, R93W, Burke County, North Dakota

This inspection record must be completed *each year*. If any response requires further elaboration, provide comments in Description & Comments space provided. Further description and comments, if necessary, must be provided on a separate sheet of paper and attached to this sheet. \*Any item that receives "yes" as an answer must be described and addressed immediately.

	Y*	N	Description & Comments
<b>Storage tanks (including produced water containers)</b>			
Tank surfaces show signs of leakage			
Tanks are damaged, rusted or deteriorated			
Bolts, rivets, or seams are damaged			
Tank supports are deteriorated or buckled			
Tank foundations have eroded or settled			
Level gauges <or alarms, if present> are inoperative			
Vents are obstructed			
Secondary containment is damaged or stained			
Overflow equalization lines are damaged or inoperative			
Water/product in interstice of double-walled tank (produced water tanks only)			
Free phase oil present in secondary containment			
<b>Piping/Overflow lines</b>			
Valve seals, gaskets, or other appurtenances are leaking			
Valves are damaged, rusted, or deteriorated			
Pipelines or supports are damaged, rusted, or deteriorated			
Joints, valves and other appurtenances are leaking			
Fill and discharge pipes are not properly sealed			
Buried piping is exposed			
<b>Loading and transfer equipment</b>			
Transfer equipment (flange joints, valve glands and bodies, drip pans, pip supports, pumping well polish rod stuffing boxes, bleeder and gauge valves, etc.) are in good condition			
Loading/unloading rack is damaged or deteriorated			
Connections are not capped or blank-flanged			
Secondary containment is damaged or stained			
<b>Flow through process vessels</b>			
Signs of leakage			
Signs of corrosion or rust			

<b>Earthen Berms</b>			
<i>Erosion/Settling</i>			
<i>Dead or Dying Vegetation</i>			
<i>Ponding Surface Water</i>			
<i>Accumulated Product</i>			
<i>Cracks or Stress</i>			
<b>Field drainage</b>			
<i>Oil traps, skimmers, sumps require accumulated oil removal</i>			
<b>Spill Kit</b>			
<i>Spill kit inventory is incomplete?</i>			
<b>Abnormalities reported to Designated Management Representative?</b>			

**Annual reminders:**

- Hold SPCC Briefing for all oil-handling personnel (and update briefing log in the Plan);
- Check contact information for key employees and response/cleanup contractors and update them in the Plan as needed;

**Additional Remarks:**

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

## APPENDIX C3

## Berm Drainage Record

Facility Name: Kestrel 36-25 1H and Glaspey SWD 1 Facility  
Facility Address: Section 1, T163N, R93W, Burke County, North Dakota

[illegible]



## APPENDIX C4

### Record of Annual Discharge Prevention Briefings and Training

Briefings will be scheduled and conducted by the facility owner or operator for operating personnel at regular intervals to ensure adequate understanding of this SPCC Plan. The briefings will also highlight and describe known discharge events or failures, malfunctioning components, and recently implemented precautionary measures and best practices. Personnel will also be instructed in operation and maintenance of equipment to prevent the discharge of oil, and in applicable pollution laws, rules, and regulations. Facility operators and other personnel will have an opportunity during the briefings to share recommendations concerning health, safety, and environmental issues encountered during facility operations.

Date: \_\_\_\_\_ Instructor: \_\_\_\_\_

Attendees: \_\_\_\_\_

---

---

---

---

---

---

---

---

---

---

Subjects and Issues: \_\_\_\_\_

---

---

---

---

---

---

---

---

Recommendations and Suggestions: \_\_\_\_\_

---

---

---

---

## **APPENDIX C5**

### **Facility Line Maintenance Program**

The Facility Line Maintenance Program is a monthly and annual inspection program for flowline/intra-facility gathering line maintenance. The inspections are to be performed by qualified personnel.

Corrective action or repairs will be implemented to any flowlines and intra-facility gathering lines and associated appurtenances as indicated by regularly scheduled visual inspections, tests, or evidence of a discharge. In the event of a leak or spill associated with any flowlines and intra-facility gathering lines and associated appurtenances, prompt removal or action to stabilize and remediate accumulations of oil discharges will take place.

#### **Conducting the Monthly Field Inspection**

Visual inspection of flowlines and intra-facility gathering lines and associated appurtenances for leaks, oil discharges, corrosion, soil settlement, or other conditions that could lead to a discharge, will be conducted on a monthly basis.

Indications of leaks in buried piping may include a change in the surface contour of the ground, discoloration of the soil, softening of paving asphalt (if present), bubbling water puddles or noticeable odor. A survey of the routes over buried piping will be made at monthly intervals.

Pressure tests of flowlines and intra-facility gathering lines and associated appurtenances for leaks, corrosion, or other conditions that could lead to a discharge, will be conducted on an annual basis.

#### **Conducting an Annual Pressure Test**

1. Identify the maximum test pressure to be used, 110% of the maximum system operating pressure, or as determined by the Project Engineer prior to testing.
2. Identify the steel piping circuit to be tested.
3. Examine all connections prior to the test to ensure proper tightness.
4. Determine the pressure rating for all connected fittings and devices to ensure they are rated for the maximum test pressure.
5. Pressure relief valves shall be removed, or held down by a suitably designed test clamp.
6. Apply a preliminary test pressure of 25 psi, or as directed by the Project Engineer. Hold for a minimum of 10 minutes to insure location of any major leaks. If leaks are detected during this step, relieve the pressure and consult the Project Engineer.
7. Apply the test pressure in increments of 25 psi, or as directed by the Project Engineer, until the maximum test pressure is reached. Hold pressure for 5-minutes during each 25psi increment.
8. Maximum test pressure should be held for at least 2 hours after initial start of test, or as directed by the Project Engineer. During the remainder of the test period, if the pressure decreases more than 5%, the piping should be visually inspected for leaks, (API RP 570 and API RP 1110).
9. Removed the pressure, with caution to avoid escaping air stream, debris, and high decibel noise level.
10. Complete the Annual Pressure/Leak Test Form.

## Pressure Test Medium

The pressure test medium should be conducted with water unless there is a possibility of damage do to freezing or other adverse effects of water on the piping system (API RP 570 5.8.1.). If water is contaminated during the pressure test, proper disposal in accordance with the state and federal regulations will be required. Another suitable nontoxic liquid may be used. According to the API RP 1110 5.2.2, liquid petroleum having a Reid vapor pressure of less than 7 pounds per square inch absolute (psia) may be used as a test medium, if **all** of the following requirements are met:

1. The pipeline system to be tested is not part of an offshore pipeline or offshore piping facility.
2. The pipeline system to be tested is not located where a release could adversely impact any environmentally sensitive areas.
3. The pipeline system to be tested (rated for operation above 275 psig) is outside of cities and/or other highly populated areas.
4. Every building located outside of the operators piping facility, but within 300 ft of the pipeline to be tested, is unoccupied while the test pressure is greater than or equal to a pressure that produces a hoop stress of 50% of the Specified Minimum Yield Strength.
5. The pipeline system to be tested is kept under surveillance by pipeline personnel equipped with portable radios or similar equipment to provide continuous communication with the person in charge.
6. Suitable contingency response equipment and personnel for spill cleanup are strategically placed near the pipeline system.
7. Test procedures meet all applicable local, state, or federal government regulations.
8. Lines should be drained and completely dried after the pressure test.

## APPENDIX C5-1

### Monthly Facility Line Maintenance Program Checklist

Inspection Date: \_\_\_\_\_  
Facility Name: Kestrel 36-25 1H and Glaspey SWD 1 Facility  
Facility Address: Section 1, T163N, R93W, Burke County, North Dakota

Inspections are to be performed monthly by qualified personnel via a thorough visual inspection of the facility and flowlines and intra-facility gathering lines and associated appurtenances.

#### Inspection Procedures

Inspections shall be conducted during sufficient light conditions and necessary equipment (ladders, flashlights, safety gear) shall be provided to allow inspection of difficult to access areas. Results of the inspections are to be documented on the following form or equivalent abnormalities shall be clearly stated on the form and the facility manager shall be notified.

Each inspection form shall be signed by the inspector, or facility manager.

	Y	N	Description & Comments
<b>Sub-surface Piping</b>			
<i>Buried piping is exposed</i>			
<i>Pipelines or supports are damaged, rusted, or deteriorated</i>			
<i>Joints, valves and other appurtenances are leaking</i>			
<i>Pools, bubbling, or odor observed</i>			
<i>Softening of soil along pipelines</i>			
<i>Settlement of soil surrounding pipelines</i>			
<i>Soil discoloration along pipelines</i>			

**Additional Remarks:**

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Signature: \_\_\_\_\_



## APPENDIX C5-2

### Annual Pressure/Leak Test Form

<b>Part A: Pressure/Leak Test Form</b>	
Name:	Kestrel 36-25 1H and Glaspey SWD 1 Facility
Address:	Section 1, T163N, R93W, Burke County, ND
Owner/Operator:	Windridge Operating LLC 518 Main Street Boerne, TX 78006
Primary Contact:	Ren Gardner, Site Manager 701.891.9020 (cell)
Secondary Contact:	Lee Billingsley, President 210.601.1110 (cell)
Test Procedure:	Test Date:
Test Medium:	
Test Start Time:	Test End Time:
Test Pressure Start (psig):	Test Pressure End (psig):
Line Loss (Y/N):	Amount Loss:
Reasons for Line Loss:	
Corrective Measures Taken:	
Comments:	
Company Representative: _____	
Signature: _____ Date: _____	

## APPENDIX C6

### Discharge Notification Form

<b>Part A: Discharge Information</b>		
General information when reporting a spill to outside authorities:		
Name:	Kestrel 36-25 1H and Glaspey SWD 1 Facility	
Address:	Section 1, T163N, R93W, Burke County, ND	
Owner/Operator:	Windridge Operating LLC 518 Main Street Boerne, TX 78006	
Primary Contact:	Ren Gardner, Site Manager 701.891.9020 (cell)	
Secondary Contact:	Lee Billingsley, President 210.601.1110 (cell)	
Type of oil:	Discharge Date and Time:	
Quantity released:	Discovery Date and Time:	
Quantity released to Storm drain:	Discharge Duration:	
Location/Source:		
Actions taken to stop, remove, and mitigate impacts of the discharge:		
Affected media:		
<ul style="list-style-type: none"> <li>▪ air</li> <li>▪ water</li> <li>▪ soil</li> </ul>	<ul style="list-style-type: none"> <li>▪ storm water sewer/POTW</li> <li>▪ dike/berm/oil-water separator</li> <li>▪ other: _____</li> </ul>	
Notification person:	Telephone contact: Business: 24-hr:	
Nature of discharges, environmental/health effects, and damages:		
Injuries, fatalities or evacuation required?		
<b>Part B: Notification Checklist</b>		
	Date and time	Name of person receiving call
<b>Discharge in any amount</b>		
Ren Gardner Site Manager 701.891.9020 (cell)		
<b>Discharge in amount exceeding 42 gallons and flowing into a storm drain</b>		
Inform Site Manager and he will call: ND Industrial Commission – Oil and Gas Division 701-328-8020		
<b>Discharge in any amount and affecting (or threatening to affect) a waterbody or human health and safety</b>		
Inform Site Manager and he will call: ND Dept of Health – Environmental Health Section 701-328-5210		

## APPENDIX C7

### Discharge Response Equipment Inventory

The discharge response equipment inventory is verified during the monthly inspection and must be replenished as needed.

Equipment list (to be kept up-to-date):

Empty 30-gallon drum to hold contaminated material	1
3" x 8' oil-only socks	6
8" x 18" sump pillows	2
18" x 18" oil-only pillows	2
16" x 20" oil-only pads	10
Temporary disposal bags	2
Drain seals	2
Absorbant Powder	2

## APPENDIX D

### Agency Notification Standard Report

Information contained in this report, and any supporting documentation, must be submitted to the EPA Region 8 Regional Administrator, and to the North Dakota Industrial Commission – Oil and Gas Division for RCRA-exempt oil spills within 60 days of the qualifying discharge incident.

<b>Facility:</b>	<i>Kestrel 36-25 1H and Glaspey SWD 1 Facility, Burke County, ND</i>
<b>Owner/operator:</b>	Windridge Operating LLC 518 Main Street Boerne, TX 78006
<b>Name of person filing report:</b>	
<b>Location:</b>	<i>Section 1, T163N, R93W</i>
<b>Maximum storage capacity:</b>	
<b>Daily throughput:</b>	
<b>Nature of qualifying incident(s):</b>  <input type="checkbox"/> Discharge to navigable waters or adjoining shorelines exceeding 1,000 gallons, or <input type="checkbox"/> Second discharge exceeding 42 gallons within a 12-month period.	
<b>Description of facility (attach maps, flow diagrams, and topographical maps):</b>  Windridge operates the oil production & saltwater disposal facility and associated pumping and storage equipment. Primary activities at this facility include production of crude oil, and storage and disposal of produced water as a byproduct of petroleum production operations.  The facility produces and stores crude oil and produced water. At the Kestrel 36-15 1H wellhead, crude oil is stored in two 400-barrel ASTs and produced water in one 400-barrel AST. A heater treater separates the natural gas, produced water, and crude oil; one 300-gallon flow-through AST is associated with the heater treater. At the Glaspey SWD 1 wellhead, mixed oil and saltwater (brine) are separated into saltwater and oil. The separator holds 500 barrels, mixed oil/saltwater is stored in one 500-barrel AST, and saltwater is stored in three 500-barrel ASTs prior to being pumped into the ground.  The majority of the facility's exterior ground surface area is covered with compacted gravel. The Kestrel tank battery and heater treaters are located in the northeast portion of the facility. The Glaspey tank battery and injection well are located in the west portion of the facility. Metal berms enclose the tank batteries and heater treater areas. A compacted earthen berm encloses the production and injection pad area.  The facility operates 24 hours per day, seven days a week and 52 weeks per year. The facility is inspected on a daily basis by the Site Manager or his/her designee.  The facility is located in the northwest 1/4 of the northeast 1/4 of Section 1, Township 163 North, Range 93 West.  The closest surface water is an unnamed wetland located approximately 300 feet north of the facility. There are no surface storm drains associated with the facility.	



Agency Notification Standard Report, Page 2

**Cause of the discharge(s), including a failure analysis of the system and subsystems in which the failure occurred:**

**Corrective actions and countermeasures taken, including a description of equipment repairs and replacements:**

**Additional preventive measures taken or contemplated to minimize possibility of recurrence:**

**Other pertinent information:**

## **APPENDIX E**

### **Oil Spill Contingency Plan**

## TABLE OF CONTENTS

1.0	Purpose .....	1
1.1	Authority and Responsibility.....	1
1.3	Resources at Risk (40 CFR 109.5[b][1]) .....	2
1.4	Risk Assessment.....	2
1.4.1	Surface lines:.....	2
1.4.2	Buried lines: .....	3
2.0	Response Strategy .....	3
2.1	Communications System (40 CFR 109.5[b][3], 40 CFR 109.5[d][3]) .....	3
2.2	Spill Response Materials .....	3
2.3	Training Exercises and Updating Procedures (40 CFR 109.5[d][1]) .....	4
3.0	Spill Discovery and Response (40 CFR 109.5[a]) .....	4
3.1	Notification of Responsible Persons .....	4
3.2	Response Activities (40 CFR 109.5 [d]) .....	6
3.2.1	Discharge Discovery and Source Control.....	7
3.2.2	Assessment and Notifications.....	7
3.2.3	Control and Recovery .....	8
3.2.4	Response Completion & Followup.....	8
3.3	Waste Disposal.....	9

# **Oil Spill Contingency Plan**

**Kestrel 36-25 1H and  
Glaspey SWD 1 Facility**  
Section 1, T163N, R93W  
Burke County, North Dakota

*Prepared for:*

**Windridge Operating LLC**

## **1.0 Purpose**

This Oil Spill Contingency Plan is prepared in accordance with 40 CFR 112.7(d) to address areas of the facility where secondary containment is impracticable, as documented in the facility Spill Prevention, Control, and Countermeasure (SPCC) Plan. Areas lacking adequate containment at the Kestrel 36-25 1H and Glaspey SWD 1 facility (Facility) include the flowlines that run between the access ports and the heater treater area, and between the tank battery area and the injection well.

The purpose of this Oil Spill Contingency Plan ("Contingency Plan") is to define procedures and tactics for responding to discharges of oil into navigable waters or adjoining shorelines of the United States, originating more specifically from flowlines at the Facility owned by Windridge Operating LLC . (Owner, or Windridge). The Contingency Plan is implemented whenever a discharge of oil has reached, or threatens, navigable waters or adjoining shorelines.

The objective of procedures described in this Contingency Plan is to protect the public, Windridge personnel, and other responders during oil discharges. In addition, the Plan is intended to minimize damage to the environment, natural resources, and facility installations from a discharge of oil. This Oil Spill Contingency Plan complements the prevention and control measures presented in the facility's SPCC Plan by addressing areas of the facility that lacks secondary containment and impacts that may result from a discharge from these areas

This Oil Spill Contingency Plan follows the content and organization of 40 CFR part 109.5 and describes the distribution of responsibilities and basic procedures for responding to an oil discharge and performing cleanup operations.

## **1.1 Authority and Responsibility**

Windridge has the primary responsibility for providing the initial response to oil discharge incidents originating from the Facility. To accomplish this, Windridge has designated the Operations Manager, Kathy Trout, as the qualified oil discharge Response Coordinator (RC) in the event of an oil discharge.



## 1.2 Resources at Risk (40 CFR 109.5[b][1])

The facility is located approximately five miles north and five miles east of the intersection of Highway 40 and Highway 5 in Columbus, North Dakota and is located in the northwest 1/4 of the northeast 1/4 of Section 1, Township 163 North, Range 93 West (see Figure 1).

The closest surface water is an unnamed wetland located across a graveled county road (108th Street NW), approximately 200 feet north of the facility. Aerial imagery indicates a culvert is present under the street, approximately 550 feet west of the facility and may receive runoff from the ditch between 108th Street NW and the Facility. Runoff south of the facility appears to flow through fields, wetlands, and intermittent streams, and could eventually reach Short Creek. There are no surface storm drains associated with the facility.

As both of these surface waters flow into Canada, they both meet the definition of navigable waters of the US.

There are no known public water intakes, residential wells, public beaches or recreational waterways within 1-mile of the Facility.

Two sets of oil-containing buried flowlines at the Facility lack adequate secondary containment (see Figure 2 of the SPCC Plan for approximate locations). The flowlines include:

- 325 feet from the Kestrel 36-25 1H oil well to the Separator and Treater
- 250 feet from the Separator and Treater to the Flare Pit
- 150 feet from the Separator and Treater to the Tank Battery
- 550 feet from the Separator and Treater to the Saltwater Tank Battery
- 145 feet from the Tank Battery to Saltwater Tank Battery
- 45 feet from the Saltwater Tank Battery to the Pump House
- 100 feet from the Pump House to Glaspey SWD 1

Given the frequency of site monitoring detailed in the SPCC Plan, a discharge from buried piping on site would be undetected for a day or more. Based on the most likely discharge scenario (release from joint, gasket or penetration) the discharge would daylight at the ground surface. A dissolved plume in groundwater could travel to the nearest downgradient surface water, or tile line if present in a farm field. Therefore visual inspection of downgradient surface waters and tile inlets are included as part of the Facility inspection regime.

## 1.3 Risk Assessment

The at-risk flowlines for the Facility are comprised of approximately 1,465 feet of 4-inch diameter flowlines. With the exception of lines daylighted within the tank battery berm, all flowlines are underground. The Facility well has a production rate of <<Daily production rate>> gallons of fluid per day (<<Daily production rate>> bbls per day). The flowlines contain up to <<Daily production rate>>\*4in diameter gallons of crude oil and produced water when completely filled.

### 1.3.1 Surface lines:

The facility is visited daily. For planning purposes, the worst-case discharge is the volume within the flowline plus 24-hours of production, or <<Daily production rate>>gallons per day.

Using sheet flow transport equations for water, the overland velocity of oil is estimated based on ground cover of short grass pasture, at approximately 0.2 feet per second. Assuming a time of travel

distance between the Facility and the creek, a worst-case release from the flowline would reach the wetland to the north in about 1 hour.

### 1.3.2 Buried lines:

Buried lines will be checked for leaks using visual observation of the backfill trench and line pressure testing as described in the Appendix C5 of the SPCC Plan: *Monthly Facility Line Maintenance Program*. Given the typical native soils of clays and loams, the most permeable material will be encountered in the backfill of the buried lines. Any release from buried pipelines is likely to flow preferentially through the backfill material and be retained in the vicinity of the buried lines.

The soil hydraulic conductivity affects the capacity of the soil to conduct or pass water and/or liquid contaminants. Typical soils in the vicinity of the facility are clays and loams, assuming a maximum hydraulic conductivity,  $K$  in cm/s of  $23 \times 10^{-4}$ , which translates to 6.5 feet per day.

## 2.0 Response Strategy

Windridge personnel are equipped and trained to respond to minor discharges and most major discharges confined within the facility, as described in the SPCC Plan, Sections 5.1 and 5.2, respectively.

This Contingency Plan addresses all discharge incidents, including those that affect navigable waters or during which the oil cannot be safely controlled by facility personnel and confined within the boundaries of the facility. Response to such incidents may necessitate the assistance of outside contractors or other responders to prevent imminent impact to navigable waters.

### 2.1 Communications System (40 CFR 109.5[b][3], 40 CFR 109.5[d][3])

A central coordination center will be set up at the field office in the event of a discharge. The field office is equipped with a variety of fixed and mobile communication equipment (telephone, fax, cell phones, computers) to ensure continuous communication with Windridge management, responders, authorities, and other interested parties.

Communications equipment includes:

- Cell phones. RC and each Windridge field response team member are provided with a cell phone. The RC and/or his alternate (Site Supervisor when the Field Operations Manager is not "on call") can be reached by cell phone 7 days a week, 24 hours a day.
- The RC is responsible for communicating the status of the response operations and for sharing relevant information with involved parties, including local, state, and federal authorities listed at the front of the document.
- In the event that local response agencies, North Dakota authorities, or a federal On Site Coordinator (OSC) assumes Incident Command, the RC will function as the facility representative in the Unified Command structure.

### 2.2 Spill Response Materials

A spill response kit is carried on the RC's vehicle, and a cache of spill response supplies is maintained at a central field location. Descriptions of spill response materials are included in Appendix C7 of the SPCC Plan.



In addition, in the event of a worst-case release, a backhoe or similar piece of equipment will be brought in to dig trenches or place berms to control the extent of the release. A backhoe or front-end loader would be utilized to load the material into dump trucks which would haul the material to an approved disposal facility.

## **2.3 Training Exercises and Updating Procedures (40 CFR 109.5[d][1])**

Windridge will establish a training program to ensure that Windridge personnel responding to oil discharges are properly trained and that all necessary equipment is available to them. The RC is responsible for implementing and evaluating employee preparedness training.

Following a response to an oil discharge, the RC will evaluate the actions taken and identify procedural areas where improvements are needed. As necessary, the RC will amend this Contingency Plan and/or the SPCC Plan to reflect changes made to the facility equipment and procedures. A Professional Engineer will certify any technical amendment to the SPCC Plan.

## **3.0 Spill Discovery and Response (40 CFR 109.5[a])**

A list of responsible persons and alternates is provided on the cover of the SPCC document.

### **3.1 Notification of Responsible Persons**

Instructions and phone numbers for reporting a discharge to the National Response Center and other federal, state, and local authorities are provided on the cover of this plan, and in Section 5.4 and Appendix C6 of the SPCC Plan.

If the discharge qualifies under 40 CFR part 112 (see SPCC Appendix B for conditions), the RC is responsible for ensuring that all pertinent information is provided to the EPA Regional Administrator.

The RC will coordinate response during an emergency situation, and has the authority to commit the necessary services and equipment to respond to the discharge and to request assistance from local fire and/or police departments, contractors, or other responders, as appropriate.

The RC will direct notifications and initial response actions in accordance with training and capabilities. In the event of a fire or emergency situation that threatens the health and safety of those present at the site, the RC will direct evacuations and contact the fire and police departments.

In the event of an emergency involving outside response agencies, the RC's primary responsibility is to provide information regarding the characteristics of the materials and equipment involved and to provide access to Windridge resources as requested. The RC shall also take necessary measures to control the flow of people, emergency equipment, and supplies and obtain the support of the local Police Department as needed to maintain control of the site. These controls may be necessary to minimize injuries and confusion.

Finally, the RC serves as the coordinator for site communications by acquiring all essential information and ensuring clear communication of information to emergency response personnel. The RC has access to reference material at the field office either as printed material or on computer files that can further assist the response activities.

Whenever circumstances permit, the RC transmits assessments and recommendations to Windridge Senior Management for direction. The Senior Management representative is Heath Norman, Manager.



In the event that the Operations Manager is not available, the responsibility and authority for initiating a response to a discharge rests with the most senior Windridge employee on site at the time the discharge is discovered (Crew Lead) or with the contractor Field Supervisor (or next person in command) if contractor personnel are the only personnel on site.

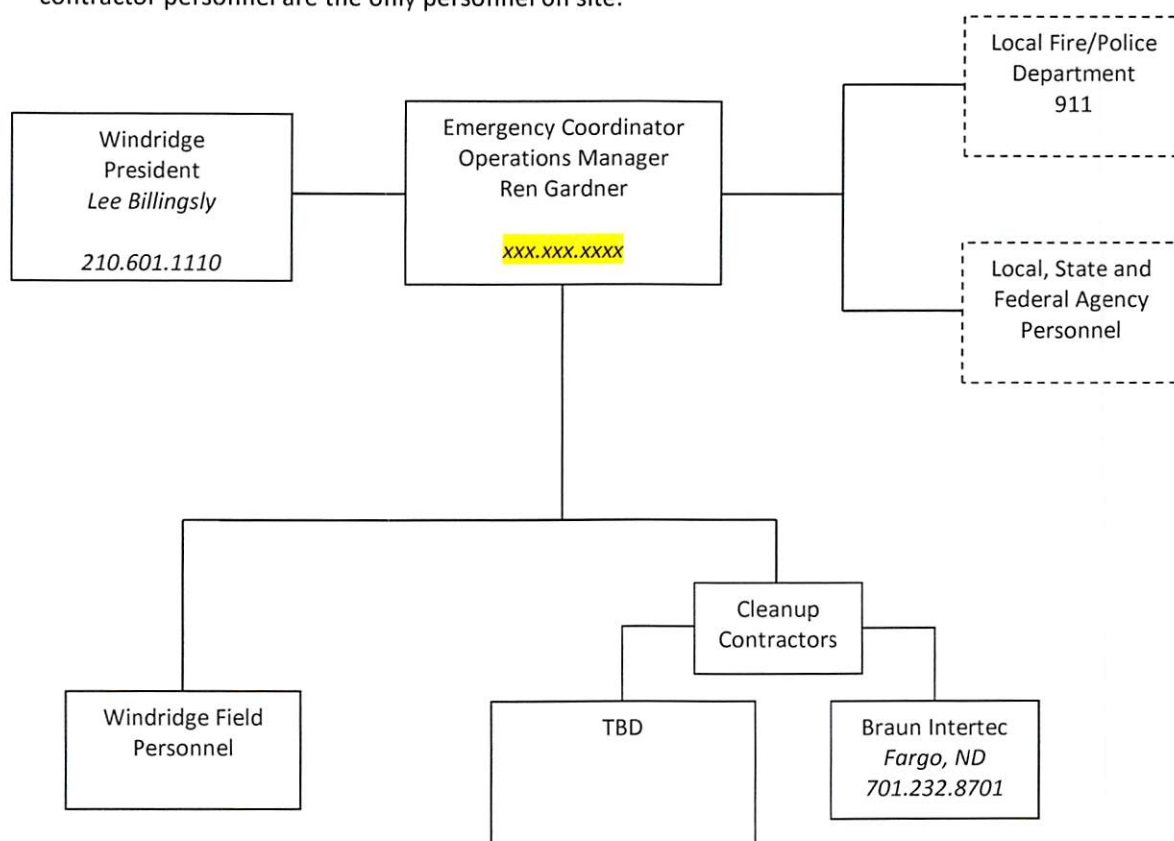


Figure 1 – Response Authority and Communication Lines

### 3.2 Response Activities (40 CFR 109.5 [d])

In the event of a discharge, the first priority is to stop the product flow and to shut off all ignition sources, followed by the containment, control, and mitigation of the discharge.

Notifications to the National Response Center, North Dakota authorities and local fire/police must occur immediately upon discovery of reportable discharges.

**3.2.1 Discharge Discovery and Source Control**

<b>Actions</b>	<b>Completed</b>
Immediately report the discharge to the RC, providing the following information: <ul style="list-style-type: none"> <li>• Exact location;</li> <li>• Material involved;</li> <li>• Quantity involved;</li> <li>• Topographic and environmental conditions;</li> <li>• Circumstances that may hinder response; and</li> <li>• Injuries, if any.</li> </ul>	
Turn off all sources of ignition.	
Turn off lift pumps that charge or provide flow to the flowline.	
Locate the flowline break.	
If safe, isolate the affected section of piping by closing off the closest valves upstream and downstream from the break	

**3.2.2 Assessment and Notifications**

<b>Actions</b>	<b>Completed</b>
Investigate the discharge to assess the actual or potential threat to human health or the environment: <ul style="list-style-type: none"> <li>• Location of the discharge relative to receiving waterbodies;</li> <li>• Quantity of spilled material;</li> <li>• Ambient conditions (temperature, rain);</li> <li>• Other contributing factors such as fire or explosion hazards; and</li> <li>• Sensitive receptors downstream.</li> </ul>	
Request outside assistance from local emergency responders, as needed.	
Evaluate the need to evacuate facility and evacuate employees, as needed.	
Notify the fire/police departments to assess whether community evacuation is needed.	
Notify immediately: <ul style="list-style-type: none"> <li>• 911</li> <li>• National Response Center</li> <li>• Response contractor(s)</li> <li>• State authorities</li> </ul>	
Communicate with neighboring property owners regarding the discharge and actions taken to mitigate the damage.	
If the oil reaches (or threatens to reach) a navigable waterway, notify the local fire/police departments to limit access to the waterway by local residents until the oil has been contained and recovered. Additionally, notify downstream water users of the spill and of actions that will be taken to protect these downstream receptors.	

### 3.2.3 Control and Recovery

The RC directs the initial control of the oil flow by Windridge, and other contractor personnel. The actions taken will depend on whether the oil has reached flowing water or is still on land or in isolated sloughs. All effort will be made to prevent oil from reaching water.

#### If the oil has not yet reached flowing water or a surface receptor:

Actions	Completed
Deploy sand bags and absorbent socks downgradient from the oil, or erect temporary barriers such as trenches or mounds to prevent the oil from flowing towards a navigable waterway.	
Implement land based response actions (countermeasure) such as digging temporary containment pits, ponds, or curbs to prevent the flow of oil into the river.	
Deploy absorbent sock and sorbent material along the shoreline to prevent oil from entering waters.	
Place impacted materials in a temporary stockpile or place directly into dump trucks for hauling to an approved disposal facility.	

#### If the oil has reached flowing water or a surface receptor:

Actions	Completed
Contact cleanup team and/or contractor(s).	
Deploy floating booms immediately downstream from the release point. Depth of the water body should be checked to determine if floating boom deployment will require the use of a boat.	
Control oil flow on the ground by placing absorbent socks and other sorbent material or physical barriers (e.g., "kitty litter," sandbags, earthen berm, trenches) across the oil flow path.	
Deploy additional floating booms across the whole width of the navigable waterway at the next access point downstream from the release point.	
Deploy protective booming measures for downstream receptors that may be impacted by the spill.	

### 3.2.4 Response Completion & Follow up

The RC ensures that cleanup has been completed and that the contaminated area has been treated or mitigated according to the applicable regulations and state/federal cleanup action levels. The RC collaborates with the local, state and federal authorities regarding the assessment of damages.

Actions	Completed
Confirm that repairs to the defective equipment or flowline section have been completed.	
Review circumstances that led to the discharge and take necessary precautions to prevent a recurrence.	
Evaluate the effectiveness of the response activities and make adjustments as necessary to response procedures and personnel training.	
Carry out personnel and contractor debriefings as necessary to emphasize prevention measures or to communicate changes in operations or response procedures.	

Actions	Completed
Recommend changes or additions to the Oil Spill Contingency Plan and/or SPCC Plan.	
<p data-bbox="245 325 841 357">Submit required follow-up reports to the authorities:</p> <ul data-bbox="245 378 1068 878" style="list-style-type: none"><li data-bbox="245 378 1068 576">• In the case where the discharge (as defined in 40 CFR 112.1(b)) was greater than 1,000 gallons or was the second discharge (as defined in 40 CFR 112.1(b)) of 42 gallons or more within any 12-month period, the RC is responsible for submitting the required information within 60 days to the EPA Regional Administrator following the procedures outlined in <b>Appendix B</b> of the <b>SPCC Plan</b>.</li><li data-bbox="245 597 1068 761">• Within 30 days of the discharge, the RC will conduct an incident critique including all appropriate persons that responded to the spill. The goal of the incident critique is to discuss lessons learned, the effectiveness of the Contingency Plan and its implementation, and coordination of the plan with other state and local plans.</li><li data-bbox="245 783 1068 878">• Within 60 days of the critique, the Contingency Plan will be updated (as needed) to incorporate the results, findings, and suggestions developed during the critique.</li></ul>	

### 3.3 Waste Disposal

Wastes resulting from a discharge response will be managed as described in the SPCC Plan, Section 5.3.



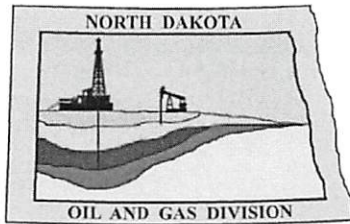
**Kadrmass, Bethany R.**

Case # 26122

**From:** Kadrmass, Bethany R.  
**Sent:** Friday, August 25, 2017 11:08 AM  
**To:** Carroll, Patricia J.; Lamb, Marcia D.; Hummel, Richard J.; Tivis, Sandra K.; Jensen, Jeanie S.; Jastrzebski, Gayle M.; Dolezal, Tracey K.; Sperry, Tamra L.; Schmidt, Jeri G.; Carpenter, Darlene K.; Svihovec, Linda M.; Korgel, Leslie D.; Brost, Shana L.; Pappa, Stephanie; Pollman, LeAnn M.; Buzalsky, Lorrie; Haag, Kay A.; devra.smestad@wardnd.com; Innis, Beth M.; lisal@co.mountrail.nd.us; CityofKilldeer@killdeer.com; vawnitabest@gmail.com  
**Subject:** NDIC Notice - 09/20/17 and 09/21/17 Dockets  
**Attachments:** CountyNoticeLtr092017.pdf; CountyNoticeLtr092117.pdf; docket092017.pdf; docket092117.pdf

Please see the attached letters. If you are not the appropriate recipient, or if you would like this electronic notice sent to an additional email address, please let me know.

Bethany Kadrmass  
North Dakota Oil and Gas Division  
P: 701-328-8020 | F: 701-328-8022  
[brkadrmass@nd.gov](mailto:brkadrmass@nd.gov) | [www.dmr.nd.gov/oilgas](http://www.dmr.nd.gov/oilgas)



# Oil and Gas Division

Lynn D. Helms - Director

Bruce E. Hicks - Assistant Director

Department of Mineral Resources

Lynn D. Helms - Director

North Dakota Industrial Commission

[www.dmr.nd.gov/oilgas/](http://www.dmr.nd.gov/oilgas/)

August 25, 2017

## Via Electronic Mail

North Dakota County Auditors of Adams, Billings, Bottineau, Bowman, Burke, Divide, Dunn, Golden Valley, Hettinger, McHenry, McKenzie, McLean, Mercer, Mountrail, Renville, Slope, Stark, Ward, Williams

**RE: Case No(s). 26111, 26122**

Dear Auditors:

The above captioned cases are docketed for hearing on September 21, 2017. Written notice is being provided for cases pertaining to disposal of saltwater and oilfield wastes. Attached is a copy of the September 21, 2017 docket.

If you have any questions, do not hesitate to contact me.

Sincerely,

Bethany Kadrmas  
Legal Assistant

BEFORE THE INDUSTRIAL COMMISSION  
OF THE STATE OF NORTH DAKOTA

CASE NO. 26122

Application of Windridge Operating LLC pursuant to Section 43-02-03-88.1 of the N.D. Admin. Code for an order of the Commission authorizing the drilling of a salt water disposal well to be located in Lot 2 of Section 1, Township 163 North, Range 93 West, Short Creek Field, Burke County, North Dakota, in the Dakota Group pursuant to chapter 43-02-05 of the N.D.A.C., and providing such other and further relief.

**RECEIVED**  
AUG 15 2017  
ND Oil & Gas Div.

APPLICATION OF WINDRIDGE OPERATING LLC

Windridge Operating LLC ("Windridge"), for its application to the North Dakota Industrial Commission ("Commission"), respectfully states as follows:

1.

That Windridge Oil & Gas LP, an affiliate of Windridge, is the owner of an interest in the surface estate in Lot Two (Lot 2) of Section 1, Township 163 North, Range 93 West, Burke County, North Dakota ("Section 1").

2.

That such lands are within the boundaries of the Short Creek Field.

3.

That pursuant to Chapter 43-02-05 of the North Dakota Administrative Code, Windridge is desirous of drilling a well in Lot 2 of Section 1 for the purposes of utilizing said well for the underground injection of fluids into the Dakota Group produced from wells in the Short Creek Field.

4.

That attached herewith and marked Exhibit A is a list of all landowners within the area of review to each of which will be mailed a copy of this application.

5.

That Windridge requests that the Commission enter its order authorizing the underground injection of fluids into the Dakota Group in a well located in Lot Two (Lot 2) of Section 1, Township 163 North, Range 93 West, Short Creek Field, Burke County, North Dakota, pursuant to Chapter 43-02-05 of the North Dakota Administrative Code and providing such other and further relief as the Commission deems necessary.

**WHEREFORE**, Windridge requests the following:

- (a) That this matter be set for the regularly scheduled September 2017 hearings of the Commission;
- (b) That the Commission issue its order granting the relief requested and such other and further relief as the Commission may deem appropriate; and
- (c) That pursuant to Section 43-02-03-88.2 of the North Dakota Administrative Code, Windridge's witnesses in this matter be allowed to participate by telephonic means.



DATED this 14 day of August, 2017.

FREDRIKSON & BYRON, P.A.

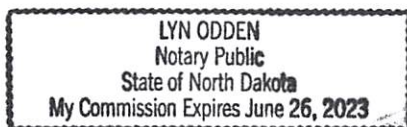
By LAWRENCE BENDER, ND Bar #03908  
*Attorneys for Applicant, Windridge Operating LLC*  
1133 College Drive, Suite 1000  
P. O. Box 1855  
Bismarck, ND 58502-1000  
(701) 221-8700

STATE OF NORTH DAKOTA )  
 ) ss.  
COUNTY OF BURLEIGH )

**LAWRENCE BENDER**, being first duly sworn on oath, deposes and says that he is the attorney for the applicant named herein, that he has read the foregoing application, knows the contents thereof, and that the same is true to the best of this affiant's knowledge, and belief.

LAWRENCE BENDER

Subscribed and sworn to before me this 14 day of August, 2017.



Notary Public  
Burleigh County, North Dakota  
My Commission Expires:  
6/9/25 11:00 AM

**EXHIBIT A**

**SURFACE OWNERS WITHIN 1/4 MILE OF GLASPEY SWD 1  
LOT 2 OF SECTION 1-T163N-R93W**

TERRY L. & TERESA GLASPEY  
10660 91ST AVE NW  
PORTAL ND 58772

TX3 LLLP  
662 SUNSET CT  
SHOREVIEW MN 55126

ND DEPT OF TRUST LANDS  
PO BOX 5523  
BISMARCK ND 58506-5523

61925219\_1.DOC

August 14, 2017

**RECEIVED**

**AUG 15 2017**

**ND Oil & Gas Div.**

Mr. Bruce Hicks  
Assistant Director  
North Dakota Industrial Commission  
Oil and Gas Division  
600 East Boulevard  
Bismarck, North Dakota 58505-0310

**RE: APPLICATION OF WINDRIDGE  
OPERATING LLC FOR  
SEPTEMBER 2017 HEARINGS**

Dear Mr. Hicks:

Please find enclosed herewith for filing an APPLICATION OF WINDRIDGE OPERATING LLC.

**As you will note, pursuant to N.D. Admin. Code § 43-02-03-88.2, Windridge requests that its witnesses be allowed to participate at the hearing by telephonic means.**

Should you have any questions, please advise.

Sincerely,



LAWRENCE BENDER

LB/leo

Enclosure

cc: Mr. Matt Billingsley – (w/enc.) *Via Email*

Attorneys & Advisors  
main 701.221.8700  
fax 701.221.8750  
fredlaw.com

Fredrikson & Byron, P.A.  
1133 College Drive, Suite 1000  
Bismarck, North Dakota  
58501-1215



**Classified  
Advertising  
Invoice**

**Bismarck Tribune**

PO BOX 540  
Waterloo, IA 50704-0540

888-418-6474

**RECEIVED**  
**SEP 07 2017**

**OIL & GAS DIVISION**

**600 E BLVD AVE #405  
BISMARCK ND 58505**

**Customer: 60010203**

**Phone: (701) 328-8020**

**Date: 08/30/2017**

**ND Oil & Gas Div.**

Date	Order #	Type	Order Amt
08/30/17	20906886	INV	450.69

Amount Paid	CK #

**CREDIT CARD PAYMENT (circle one)**



Card #:

Exp Date:

Signature:

*Credit card users: Fax to 319-291-4014*

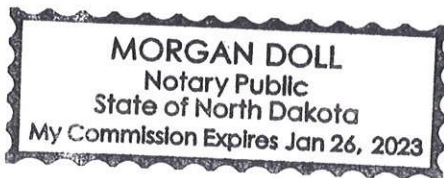
PLEASE DETACH AND RETURN TOP PORTION WITH YOUR PAYMENT

Lee Enterprises no longer accepts credit card payments sent via e-mail. Emails containing credit card numbers will be blocked. Please use the coupon above to send a credit card payment to remittance address located in the upper right corner. You may also send the coupon to a secure fax at 319-291-4014.

Date	Date	Times Run	Description	Lines	Class Code	Order Amt	Net Amt Due
			Case No. 25819	543.00	Legals	450.69	450.69
08/30/17	08/30/17	1	Bismarck Tribune PO:Hearing Notice				

**Affidavit of Publication**

State of North Dakota ) SS County of Burleigh  
Before me, a Notary Public for the State of North Dakota  
personally appeared JKL who being duly sworn, deposes  
and says that he (she) is the Clerk of Bismarck Tribune Co.,  
and that the publication(s) were made through the  
Bismarck Tribune on the following dates:  
8/30 Signed [Signature]  
sworn and subscribed to before me this 30  
day of September 2017  
[Signature]  
Notary Public in and for the State of North Dakota



Please return invoice or put order number on check. Thank You.

Remarks	Total Due: 450.69
---------	-------------------

**Bismarck Tribune**  
[www.bismarcktribune.com](http://www.bismarcktribune.com)  
PO BOX 540  
Waterloo, IA 50704-0540

Terms: PAYMENT IS DUE UPON RECEIPT OF INVOICE



**NOTICE OF HEARING  
N.D. INDUSTRIAL COMMISSION  
OIL AND GAS DIVISION**

The North Dakota Industrial Commission will hold a public hearing at 9:00 a.m. Thursday, September 21, 2017, at the N.D. Oil & Gas Division, 1000 East Calgary Ave., Bismarck, N.D. At the hearing the Commission will receive testimony and exhibits. Persons with any interest in the cases listed below, take notice.

**PERSONS WITH DISABILITIES:** If at the hearing you need special facilities or assistance, contact the Oil and Gas Division at 701-328-8038 by Friday, September 08, 2017.

**STATE OF NORTH DAKOTA TO:**

Case No. 25819: (Continued) Proper spacing for the development of the Big Dipper-Bakken Pool, Divide County, ND, redefining the field limits, and enact such special field rules as may be necessary. Mountain Divide, LLC; Resource Energy Can-Am LLC; SM Energy Co.

Case No. 26027: (Continued) On a motion of the Commission to consider the establishment or altering of spacing units in the Phelps Bay-Bakken Pool in Section 13, T.153N., R.95W., and in the Elm Tree-Bakken Pool in Section 18, T.153N., R.94W., McKenzie County, ND, and such other relief as is appropriate.

Case No. 26093: Application of Continental Resources, Inc. for an order amending the field rules for the Oakdale-Bakken Pool, Dunn County, ND, to create and establish an overlapping 5120-acre spacing unit comprised of Sections 23, 24, 25, 26, 35 and 36, T.147N., R.96W. and Sections 1 and 2, T.146N., R.96W., authorizing the drilling of total not to exceed two wells on or near the east/west center of the proposed overlapping 5120-acre spacing unit, eliminating any tool error requirements and such other relief as is appropriate.

Case No. 26094: Application of Continental Resources, Inc. for an order authorizing the drilling, completing and producing of one horizontal well with the lateral to be located approximately 440 feet from the west line of Sections 24 and 25, T.147N., R.96W., and one horizontal well with the lateral to be located approximately 440 feet from the west line of Section 36, T.147N.,

R.96W. and Section 1, T.146N., R.96W., all of which comprise an existing 2560-acre spacing unit, both as exceptions to the well location rules for the Corral Creek-Bakken Pool, Dunn County, ND, and such other relief as is appropriate.

Case No. 26095: Application of Continental Resources, Inc. for an order amending the field rules for the Oakdale-Bakken Pool, Dunn County, ND, to create and establish an overlapping 2560-acre spacing unit comprised of Sections 34 and 35, T.147N., R.96W. and Sections 2 and 3, T.146N., R.96W., authorizing the drilling of a well on or near the east/west center line of the proposed overlapping 2560-acre spacing unit and such other relief as is appropriate.

Case No. 26096: Application of Continental Resources, Inc. for an order authorizing the drilling, completing and producing of one horizontal well with the lateral to be located approximately 440 feet from the east line of Section 34, T.147N., R.96W. and Section 3, T.146N., R.96W., which constitutes an existing 1280-acre spacing unit, and as an exception to the well location rules for the Oakdale-Bakken Pool, Dunn County, ND, and such other relief as is appropriate.

**Case No. 26097:**

Application of Continental Resources, Inc. for an order as follows: (i) authorizing the drilling, completing and producing of one horizontal well with the lateral to be located approximately 440 feet from the east line of Sections 23 and 26, T.147N., R.96W., and one horizontal well with the lateral to be located approximately 440 feet from the east line of Section 35, T.147N., R.96W. and Section 2, T.146N., R.96W., all of which comprise an existing 2560-acre spacing unit; and, (ii) authorizing the drilling, completing and producing of one horizontal well with the lateral to be located approximately 440 feet from the west line of Sections 23 and 26, T.147N., R.96W., and one horizontal well with the lateral to be located approximately 440 feet from the west line of Section 35, T.147N., R.96W. and Section 2, T.146N., R.96W., all of which comprise an existing 2560-acre spacing unit, both as exceptions to the well location rules for the Oakdale-Bakken Pool, Dunn County, ND, and such other relief as is appropriate.

Case No. 25686: (Continued) A motion of the Commission to consider the termination, or any other appropriate action, of the South Antler Creek-Madison Unit, Bottineau County, ND, operated by Continental Resources, Inc.

Case No. 26098: Application of WPX Energy-Williston, LLC for an order amending the field rules for the Mandaree-Bakken Pool to create and establish an overlapping 2560-acre spacing unit comprised of Sections 26, 27, 34 and 35, T.149N., R.93W., Dunn County, ND, authorizing the drilling of a horizontal well on or near the section line between existing 640 and 1280-acre spacing units of the proposed overlapping 2560-acre spacing unit, and such other relief as is appropriate. Case No. 26099: Application of EOG Resources, Inc. for an order amending the field rules for the Parshall-Bakken Pool, Mountrail County, ND, to create and establish two overlapping 2560-acre spacing units comprised of Sections 26, 27, 34 and 35, T.155N., R.90W.; and Sections 2, 3, 10 and 11, T.154N., R.90W., authorizing the drilling of a horizontal well on or near the section line between the existing 640 and 1280-acre spacing units of each of the proposed overlapping 2560-acre spacing units, and such other relief as is appropriate.

Case No. 26100: Application of EOG Resources, Inc. for an order amending the field rules for the Clarks Creek-Bakken Pool, McKenzie County, ND, to create and establish an overlapping 2560-acre spacing unit comprised of Sections 25 and 36, T.152N., R.95W. and Sections 30 and 31, T.152N., R.94W., authorizing the drilling of multiple horizontal wells on or near the section line between the existing 960 and 1280-acre spacing units of the proposed overlapping 2560-acre spacing unit, eliminating any tool error requirements, and such other relief as is appropriate.

Case No. 26101: Application of Armstrong Operating, Inc. for an order amending the field rules for the Dickinson and/or Eland-Lodgepole Pool to create and establish a 320-acre spacing unit, or in the alternative, to create a 320-acre drilling unit comprised of the SW/4 of Section 6 and the NW/4 of Section 7, T.139N., R.96W., Stark County, ND, authorizing the drilling of a well not less than 500 feet from the spacing/drilling unit boundary on said 320-acre spacing unit or drilling unit and such other relief as is appropriate.

Case No. 26035: (Continued) Application of Liberty Resources Management Co., LLC for an order granting temporary authority to use numerous wells located in a spacing unit comprised of Sections 8 and 17, T.158N., R.95W., Williams County, ND, as injection wells for an enhanced oil recovery pilot operation in the McGregor-Bakken Pool, and such other relief as is appropriate.

Case No. 26036: (Continued) Application of PetroShale (US), Inc. for an order amending the field rules for the Mandaree-Bakken Pool to create and establish an overlapping 640-acre spacing unit comprised of the E/2 of Sections 9 and 16, T.149N., R.93W., Dunn County, ND, authorizing the drilling of a total not to exceed three wells on said overlapping 640-acre spacing unit, eliminating any tool error requirements and such other relief as is appropriate.

**Case No. 26037: (Continued)**

Application of PetroShale (US), Inc. for an order amending the field rules for the Antelope-Sanish Pool to create and establish two overlapping 2560-acre spacing units comprised of Sections 16, 17, 20 and 21; and Sections 17, 18, 19 and 20, T.152N., R.94W., McKenzie County, ND, authorizing the drilling of a horizontal well on or near the section line between the existing 1280-acre spacing units of each proposed overlapping 2560-acre spacing unit, and such other relief as is appropriate. Case No. 26102: Application of the Energy & Environmental Research Center requesting the Commission waive the requirement to obtain a drilling and reclamation bond for stratigraphic test holes to be drilled in the SESE of Section 27, T.142N., R.84W., Oliver County, ND and the SW/4 of Section 32, T.145N., R.89W., Mercer County, ND as an exception to NDAC § 43-02-03. Case No. 26103: In the matter of the authority of Statoil Oil & Gas LP, to conduct refracting operations and to recover from Lime Rock Resources III-A as an owner of a working interest in the Russell 10-3 #1-H well (File No. 19930) presently producing in paying quantities from Sections 3 and 10, T.153N., R.103W., Williams County, ND, a risk penalty as provided in NDCC § 38-08-08 and such other relief as is appropriate.

Case No. 26104: Application of Zealous Energy Services for an order allowing an indirect heater to be located closer than 150 feet to the oil tanks as an exception to the requirements of NDAC § 43-02-03-28, and such other relief as is appropriate.

Case No. 26105: Application of Slawson Exploration Co., Inc. for an order pursuant to NDAC § 43-02-03-88.1 pooling all interests for wells drilled on the overlapping spacing unit described as Sections 20 and 29, T.152N., R.91W., Big Bend-Bakken Pool, Mountrail County, ND as provided by NDCC § 38-08-08 but not reallocating production for wells producing on other spacing units and such other relief as is appropriate.

Case No. 26106: Application of Liberty Resources Management Co., LLC for an order pursuant to NDAC § 43-02-03-88.1 pooling all interests in a spacing unit described as Sections 5 and 8, T.158N., R.93W., East Tioga-Bakken Pool, Mountrail County, ND, as provided by NDCC § 38-

08-08 and such other relief as is appropriate.

Case No. 26107: Application of Liberty Resources Management Co., LLC for an order authorizing the drilling, completing and producing of a total not to exceed eight wells on each existing 1280-acre spacing unit described as Sections 25 and 36, T.158N., R.94W.; Sections 29 and 32; and Sections 30 and 31, T.158N., R.93W., East Tioga-Bakken Pool, Mountrail County, ND, eliminating any tool error requirements and such other relief as is appropriate.

Case No. 26108: Application of Liberty Resources Management Co., LLC for an order authorizing the drilling, completing and producing of a total not to exceed eight wells on an existing 1280-acre spacing unit described as Sections 27 and 34, T.158N., R.93W., Enger Lake-Bakken Pool, Mountrail County, ND, eliminating any tool error requirements and such other relief as is appropriate. Case No. 26051: (Continued) Application of Liberty Resources Management Co., LLC for an order authorizing the rework of the Gohrick 158-95-17-8-4MBH well (File No. 28439), located in a spacing unit comprised of Sections 8 and 17, T.158N., R.95W., Williams County, ND, for the temporary injection of fluids in the McGregor-Bakken Pool pursuant to NDAC Chapter 43-02-05, and § 43-02-03-88.1, allowing an exception to NDAC § 43-02-05-07, and such other relief as is appropriate.

Case No. 26052: (Continued) Application of Liberty Resources Management Co., LLC for an order authorizing the rework of the Gohrick 158-95-17-8-5TFH well (File No. 28440), located in a spacing unit comprised of Sections 8 and 17, T.158N., R.95W., Williams County, ND, for the temporary injection of fluids in the McGregor-Bakken Pool pursuant to NDAC Chapter 43-02-05, and § 43-02-03-88.1, allowing an exception to NDAC § 43-02-05-07, and such other relief as is appropriate.

Case No. 26053: (Continued) Application of Liberty Resources Management Co., LLC for an order authorizing the rework of the Gohrick 158-95-17-8-5MBH well (File No. 28441), located in a spacing unit comprised of Sections 8 and 17, T.158N., R.95W., Williams County, ND, for the temporary injection of fluids in the McGregor-Bakken Pool pursuant to NDAC Chapter 43-02-05, and § 43-02-03-88.1, allowing an exception to NDAC § 43-02-05-07, and such other relief as is appropriate.

Case No. 26054: (Continued) Application of Liberty Resources Management Co., LLC for an order authorizing the rework of the Gohrick 158-95-17-8-6TFH well (File No. 28442), located in a spacing unit comprised of Sections 8 and 17, T.158N., R.95W., Williams County, ND, for the temporary injection of fluids in the McGregor-Bakken Pool pursuant to NDAC Chapter 43-02-05, and § 43-02-03-88.1, allowing an exception to NDAC § 43-02-05-07, and such other relief as is appropriate.

Case No. 26055: (Continued) Application of Liberty Resources Management Co., LLC for an order authorizing the rework of the Leon 158-95-17-8-1MBH well (File No. 30618), located in a spacing unit comprised of Sections 8 and 17, T.158N., R.95W., Williams County, ND, for the temporary injection of fluids in the McGregor-Bakken Pool pursuant to NDAC Chapter 43-02-05, and § 43-02-03-88.1, allowing an exception to NDAC § 43-02-05-07, and such other relief as is appropriate.

Case No. 26056: (Continued) Application of Liberty Resources Management Co., LLC for an order authorizing the rework of the Leon 158-95-17-8-2MBH well (File No. 30619), located in a spacing unit comprised of Sections 8 and 17, T.158N., R.95W., Williams County, ND, for the temporary injection of fluids in the McGregor-Bakken Pool pursuant to NDAC Chapter 43-02-05, and § 43-02-03-88.1, allowing an exception to NDAC § 43-02-05-07, and such other relief as is appropriate.

Case No. 26057: (Continued) Application of Liberty Resources Management Co., LLC for an order authorizing the rework of the Leon 158-95-17-8-3TFH well (File No. 30620), located in a spacing unit comprised of Sections 8 and 17, T.158N., R.95W., Williams County, ND, for the temporary injection of fluids in the McGregor-Bakken Pool pursuant to NDAC Chapter 43-02-05, and § 43-02-03-88.1, allowing an exception to NDAC § 43-02-05-07, and such other relief as is appropriate.

Case No. 26109: Application of EOG Resources, Inc. for an order pursuant to NDAC § 43-02-03-88.1 pooling all interests for wells drilled on the overlapping spacing unit described as Sections 5, 6, 7 and 8, T.151N., R.94W., Clarks Creek-Bakken Pool and/or Antelope-Sanish Pool, McKenzie County, ND, as provided by NDCC § 38-08-08 but not reallocating production for wells producing on other spacing units and such other relief as is appropriate. Case No. 26110: Application of EOG Resources, Inc. provided for in NDAC § 43-02-03-88.1 for an order allowing the production and tank vapors from the following described wells: Wayzetta 96-3019H well (File No. 31308); Wayzetta 97-3019H well (File No. 31352); Wayzetta 98-3019H well (File No. 31309); Wayzetta 99-3019H well (File No. 31323); and Wayzetta 400-3019H well (File No. 31322), to be produced and commingled into the Wayzetta Section 30 Central Tank Battery or production facility, all located in Section 30, T.153N., R.90W., Parshall Field, Mountrail County, ND, pursuant to NDAC § 43-02-03-48.1 and such other relief as is appropriate.

Case No. 26111: Application of EOG Resources, Inc. pursuant to NDAC § 43-02-03-88.1 for an order authorizing the drilling of a saltwater disposal well to be located in the NWSW of Section 9, T.156N., R.92W., Alger Field, Mountrail County, ND, in the Dakota Group pursuant to NDAC Chapter 43-02-05, and such other relief as is appropriate.

Case No. 26112: Application of WPX Energy-Williston, LLC for an order pursuant to NDAC § 43-02-03-88.1 pooling all interests for wells drilled on the overlapping spacing unit described as Sections 12, 13 and 24, T.149N., R.95W., Squaw Creek-Bakken Pool, McKenzie County, ND as provided by NDCC § 38-08-08 but not reallocating production for wells producing on other spacing units and such other relief as is appropriate.



Case No. 26113: In the matter of the petition for a risk penalty of XTO Energy Inc. requesting an order authorizing the recovery of a risk penalty from certain non-participating owners, as provided by NDCC § 38-08-08 in the drilling and completing of the Smouse 31X-28DXA (File No. 30917) well located in a spacing unit described as Sections 27, 28, 33 and 34, T.155N., R.96W., West Capa-Bakken Pool, Williams County, ND, pursuant to NDAC § 43-02-03-88.1, and such other relief as is appropriate.

Case No. 26114: Application of XTO Energy Inc. for an order authorizing the drilling, completing and producing of a total of not more than two horizontal section line wells on an existing overlapping 1280-acre spacing unit described as all of Section 36, T.149N., R.92W., the W/2 of Section 3, and the E/2 of Section 4, T.148N., R.92W., Heart Butte-Bakken Pool, Dunn County, ND, eliminating any tool error requirements and such other relief as is appropriate.

Case No. 26115: Application of XTO Energy Inc. for an order authorizing the drilling, completing and producing of a total not to exceed four wells on an existing 640-acre spacing unit described as Section 2, T.147N., R.96W., Bear Creek-Bakken Pool, Dunn County, ND, eliminating any tool error requirements and such other relief as is appropriate.

Case No. 26116: Application of Enerplus Resources (USA) Corp. for an order

authorizing the drilling, completing and producing of a total of not more than five wells on an existing 320-acre spacing unit described as the W/2 of Section 20, T.152N., R.93W., Four Bears-Bakken Pool, McKenzie County, ND, eliminating any tool error requirements and such other relief as is appropriate.

Case No. 26117: Application of Enerplus Resources (USA) Corp. for an order authorizing the drilling, completing and producing of a total of not more than eleven wells on an existing 1280-acre spacing unit described as Sections 30 and 31, T.149N., R.93W., Mandaree-Bakken Pool, Dunn County, ND, eliminating any tool error requirements and such other relief as is appropriate.

Case No. 26118: Application of Enerplus Resources (USA) Corp. for an order for the Eagle Nest-Bakken Pool, Dunn and McKenzie Counties, ND, as follows: (i) authorizing the drilling, completing and producing of a total not to exceed five wells on each existing 320-acre spacing unit described as the W/2 of Section 5; and the E/2 of Section 16, T.148N., R.94W.; and (ii) authorizing the drilling, completing and producing of a total not to exceed eleven wells on each existing 1280-acre spacing unit described as Sections 25 and 36, T.149N., R.95W.; Sections 28 and 33; Sections 30 and 31, T.149N., R.94W.; Sections 1 and 12; Sections 2 and 11; and Sections 3 and 10, T.148N., R.95W., eliminating any tool error requirements and such other relief.

Case No. 26119: Application of Enerplus Resources (USA) Corp. for an order for the South Fork-Bakken Pool, Dunn County, ND, as follows: (i) authorizing the drilling, completing and producing of a total not to exceed five wells on each existing 320-acre spacing unit described as the W/2; and the E/2 of Section 4, T.148N., R.93W.; and (ii) authorizing the drilling, completing and producing of a total not to exceed eleven wells on each existing 1280-acre spacing unit described as Sections 13 and 14; Sections 15 and 16; Sections 21 and 22; and Sections 23 and 24, T.148N., R.93W., eliminating any tool error requirements and such other relief as is

Case No. 26120:

Application of Zavanna, LLC provided for in NDAC § 43-02-03-88.1 for an order allowing the production and tank vapors from the following described wells: Sigurd 32-29 2H well (File No. 29252), Sigurd 32-29 4TFH well (File No. 29253), Sigurd 32-29 6H well (File No. 29254), Sigurd 32-29 8TFH well (File No. 29255), Stockyard Creek Field, Sigurd 5-8 1TFH well (File No. 29248), Sigurd 5-8 3H well (File No. 29249), Sigurd 5-8 5TFH well (File No. 25250), and Sigurd 5-8 7H well (File No. 29251), Crazy Man Creek Field, to be produced and commingled into the Sigurd Central Tank Battery or production facility, all located in Section 5, T.153N., R.99W., Williams County, ND, pursuant to NDAC § 43-02-03-48.1 and such other relief as is Case No. 26121: Application of Resonance Exploration (ND) LLC as provided for in NDAC § 43-02-03-88.1 for an order allowing the production from the following wells: Resonance Ballantyne 13-20H well (File No. 29452), located in Section 20, and Resonance R.E. Ballantyne Farms 1-30H well (File No. 31525), located in Section 30, to be produced into the Resonance Ballantyne 13-20 Central Tank Battery or production facility (CTB No. 229452-01), located in Section 20, all in T.163N., R.80W., Westhope-Spearfish/Madison Pool, Bottineau County, ND, pursuant to 43-02-03-48.1 and such other relief as is appropriate.

Case No. 26122: Application of Windridge Operating LLC pursuant to NDAC § 43-02-03-88.1 for an order authorizing the drilling of a saltwater disposal well to be located in Lot 2 of Section 1, T.163N., R.93W., Short Creek Field, Burke County, ND, in the Dakota Group pursuant to NDAC Chapter 43-02-05 and such other relief as is appropriate.

Case No. 26043: (Continued) Application of Nine Point Energy, LLC for an order pursuant to NDAC § 43-02-03-88.1 pooling all interests in a spacing unit described as Sections 2, 3, 10 and 11, and the E/2 of Sections 4 and 9, T.152N., R.103W., Eightmile-Bakken Pool, McKenzie and Williams Counties, ND as provided by NDCC § 38-08-08 and such other relief as is appropriate.

Signed by,

Doug Burgum, Governor  
Chairman, ND Industrial  
8/30 - 20906886

THE BURKE COUNTY TRIBUNE  
AFFIDAVIT OF PUBLICATION **RECEIVED**

STATE OF NORTH DAKOTA)  
COUNTY OF BURKE)

SEP 05 2017

ND Oil & Gas Div.

Kristi M. Bohl of said County and State, being first duly sworn, on her oath, says that she is the owner of The Burke County Tribune, a weekly newspaper of general circulation, printed at Bowbells, in said County and State, and that she has been during the time hereinafter mentioned, and that the The Notice of Publication of

Notice of Hearing

a printed copy of which is hereto annexed, was published in the regular and entire issue of said newspaper during the period and time of publication, and that the Notice was published in the newspaper proper and not in supplement, once each week for 1 successive weeks, to wit:

8-30 2017      20      20

20      20      20

Kristi M. Bohl  
Kristi M. Bohl, Publisher

Subscribed and sworn to before me this 30th day of

August, 2017

Lyann Olson

Notary Public in and for  
Burke County, North Dakota

1st time 30 lines at .74 per line 28.12

2nd time \_\_\_\_\_ lines at \_\_\_\_\_ per line \_\_\_\_\_

3rd time \_\_\_\_\_ lines at \_\_\_\_\_ per line \_\_\_\_\_

1st time \_\_\_\_\_ column inches at \_\_\_\_\_ per line \_\_\_\_\_

2nd time \_\_\_\_\_ column inches at \_\_\_\_\_ per line \_\_\_\_\_

TOTAL \_\_\_\_\_

**Notice of Hearing**

**N.D. INDUSTRIAL COMMISSION  
OIL AND GAS DIVISION**

The North Dakota Industrial Commission will hold a public hearing at 9:00 a.m. Thursday, September 21, 2017, at the N.D. Oil & Gas Division, 1000 East Calgary Ave., Bismarck, N.D. At the hearing the Commission will receive testimony and exhibits. Persons with any interest in the cases listed below, take notice.

**PERSONS WITH DISABILITIES:** If at the hearing you need special facilities or assistance, contact the Oil and Gas Division at 701-328-8038 by Friday, September 08, 2017.

**STATE OF NORTH DAKOTA TO:**

Case No. 26104: Application of Zealous Energy Services for an order allowing an indirect heater to be located closer than 150 feet to the oil tanks as an exception to the requirements of NDAC § 43-02-03-28, and such other relief as is appropriate.

Case No. 26122: Application of Windridge Operating LLC pursuant to NDAC § 43-02-03-88.1 for an order authorizing the drilling of a saltwater disposal well to be located in Lot 2 of Section 1, T.163N., R.93W., Short Creek Field, Burke County, ND, in the Dakota Group pursuant to NDAC Chapter 43-02-05 and such other relief as is appropriate.

Signed by,  
Doug Burgum, Governor  
Chairman, ND Industrial  
August 30, 2017

LYANN OLSON  
Notary Public  
State of North Dakota  
My Commission Expires Aug. 6, 2020