

# Corrective Action Report

NDIC Site #7 – S17-T155N-R98W  
S20-T155N-R98W  
Epping, Williams County, North Dakota

April 20, 2016

Terracon Project No. M6167005



**Prepared for:**

NDIC Oil and Gas Division  
Bismarck, North Dakota

**Prepared by:**

Terracon Consultants, Inc.  
West Fargo, North Dakota

[terracon.com](http://terracon.com)

**Terracon**

Environmental



Facilities



Geotechnical



Materials



April 20, 2016

Mr. Cody VanderBusch  
Reclamation Specialist  
NDIC Oil and Gas Division  
600 East Boulevard Avenue Dept. 405  
Bismarck, ND 58505-0840  
Office 701-328-8020  
Cell 701-391-1959

Re: Corrective Action Report  
NDIC Site #7 S17-T155N-R98W and S20-T155N-R98W  
Epping, Williams County, North Dakota  
Terracon Project No. M6167005

Dear Mr. VanderBusch:

Terracon Consultants, Inc. (Terracon) is pleased to submit the enclosed Corrective Action Report (CAR) which summarizes sealing of seismic boreholes that had groundwater emanating along the annulus causing surface impacts to agricultural cropland southeast of Epping, Williams County, North Dakota. Prior to proceeding with borehole sealing activities at the site, Terracon prepared a Corrective Action Plan (CAP) dated November 18, 2015 (revised February 8, 2015) which was submitted to North Dakota Industrial Commission (NDIC) Oil and Gas Division for review and approval. Terracon conducted the scope of services outlined in the CAP in general accordance with our Master Service Agreement (reference number 110.7-15-004) dated September 1, 2015 and your notice to proceed dated February 8, 2016.

At this time, the site has been reclaimed and borehole sealing has been completed. Based on the oversight activities, seismic boreholes have been sealed without groundwater emanating from the borehole. Please refer to the report for details.

Terracon appreciates this opportunity to provide our services to NDIC Oil and Gas Division. Should you have questions or require additional information, please do not hesitate to contact our office.

Sincerely,  
**Terracon Consultants, Inc.**

Jacqueline M. Finck  
Staff Geologist

Dan C. Nebel  
Approved Project Reviewer



Terracon Consultants, Inc. 860 9<sup>th</sup> Street NE West Fargo, North Dakota 58078  
P 701-282-9633 F 701-282-9635 terracon.com

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**CORRECTIVE ACTION REPORT**  
**NDIC Site #7 – S17-T155N-R98W and S20-T155N-R98W**  
**EPPING, WILLIAMS COUNTY, NORTH DAKOTA**

**Terracon Project No. M6167005**  
**April 20, 2016**

## **1.0 INTRODUCTION**

The site is located in Section 17 (Sec 17), Township 155 North (T155N), Range 98 West (R98W) and Sec 20, T155N, R98W, near Epping, Williams County, North Dakota. Terracon understood the site is located on parcels of land owned by Rolf Gjorven (Parcel Number 28155980017055, 28155980020040, and 28155980020050), Cote Family Trust (Parcel Number 28155980017010), and Kenneth Hetzler (Parcel Number 28155980017040). Access agreements were obtained with the respective landowners and notification was made to respective tenants.

### **1.1 Corrective Action**

A CAP was prepared by Terracon dated November 18, 2015 (revised February 8, 2016) to manage remediation activities and the plugging of the seismic boreholes. The CAP was approved by the NDIC on February 8, 2016. The CAP proposed the following response actions:

- Based upon data obtained through visual site assessment, six abandoned seismic boreholes required sealing. Terracon would seal the abandoned boreholes in accordance with North Dakota Department of Health (NDDoH) water well abandonment guidelines outlined in Article 33-18 of the North Dakota Administrative Code (NDAC) by restoring, as far as possible, the geological conditions which existed before the boreholes were drilled.
- Each borehole would be made free of all loose material that could cause bridging during decommissioning by over-drilling using solid/hollow stem auger or air/mud rotary drilling techniques.
- If water is present, the water in the borehole will be disinfected to 100 parts per million (ppm) chlorine concentration. A 100 ppm chlorine concentration will require two pounds of laundry bleach or 1.2 pounds of calcium hypochlorite per one thousand gallons of water.
- Following completion of disinfecting activities, the borehole will be filled with an appropriate plugging material to a depth not less than three feet below grade surface. Neat cement or a cement/bentonite mixture may be used throughout the entire length of the borehole. Grout will be injected at the bottom of the hole using a pressure grouting technique or gravity-fed with a *tremie*' pipe forcing grout and fluids present upwards. This will be done in one continuous operation in such a fashion as to prevent any voids or air pockets from forming; side-discharge *tremie*' pipe will be placed in the hole and slowly

## Corrective Action Report – NDIC Site #7

NDIC Oil and Gas Division ■ Epping, Williams County, North Dakota

April 20, 2016 ■ Terracon Project No. M6167005



pulled up as the grout reaches the bottom of the *tremie*' pipe. Concrete or topsoil will be used as a cap for the remainder of the borehole to the surface.

- Cuttings from the drilling operations will be thin spread on the site.

## 2.0 DISCUSSION

### 2.1 Seismic Borehole Sealing and Reclamation

Terracon was on-site March 7 through 9 and 17 through 20, 2016 to complete sealing activities for the six seismic boreholes. Terracon subcontracted Absorbent and Safety Solutions (ABS) to dewater an area in proximity to borehole Cote 2 to determine the location of the borehole. Please refer to the table below (Table 1) for details of each borehole. Locations of each borehole can be found in Appendix A – Exhibit 2.

**Table1: Borehole Sealing Records**

Borehole ID	Location	Latitude	Longitude	Date Completed	Sealing Material	Depth (ft)
Gjorven 1	SE¼ of S20-T155N-R98W	48.232717°	-103.310843°	3/8/2016	Holeplug®	0-10
					Bentonite Grout	10-150
Gjorven 2	NW¼ of S20-T155N-R98W	48.241286°	-103.31821°	3/9/2016	Bentonite Grout	0-150
Hetzler 1	SE¼ of S17-T155N-R98W	48.248593°	-103.313882°	3/18/2016	Holeplug®	0-10
					Bentonite Grout	10-150
Hetzler 2	SE¼ of S17-T155N-R98W	48.248506°	-103.312835°	3/17/2016	Holeplug®	0-10
					Bentonite Grout	10-150
Cote 1	SW¼ of S17-T155N-R98W	48.248595°	-103.316885°	3/20/2016	Holeplug®	0-10
					Bentonite Grout	10-100
Cote 2	SW¼ of S17-T155N-R98W	48.248573°	-103.314508°	3/19/2016	Holeplug®	0-10
					Bentonite Grout	10-100

Terracon visited the site on Tuesday March 29, 2016 to review completion of sealed seismic boreholes. ABS arrived on-site Monday April 4, 2016 to remove drilling mud on the Hetzler and Cote properties and repair impacts from dewatering activities for borehole Cote 2.

## 3.0 CONCLUSIONS

Terracon sealed six abandoned seismic boreholes by over-drilling approximately 100 to 150 feet below grade surface (bgs) and filling with bentonite grout. The approximate top 10 feet of each borehole, excluding Gjorven 2, was back-drilled and filled with Holeplug®.

**Corrective Action Report – NDIC Site #7**

NDIC Oil and Gas Division ■ Epping, Williams County, North Dakota

April 20, 2016 ■ Terracon Project No. M6167005



## **4.0 RECOMMENDATIONS**

Based on the analytical results, Terracon recommends no further action for the site.

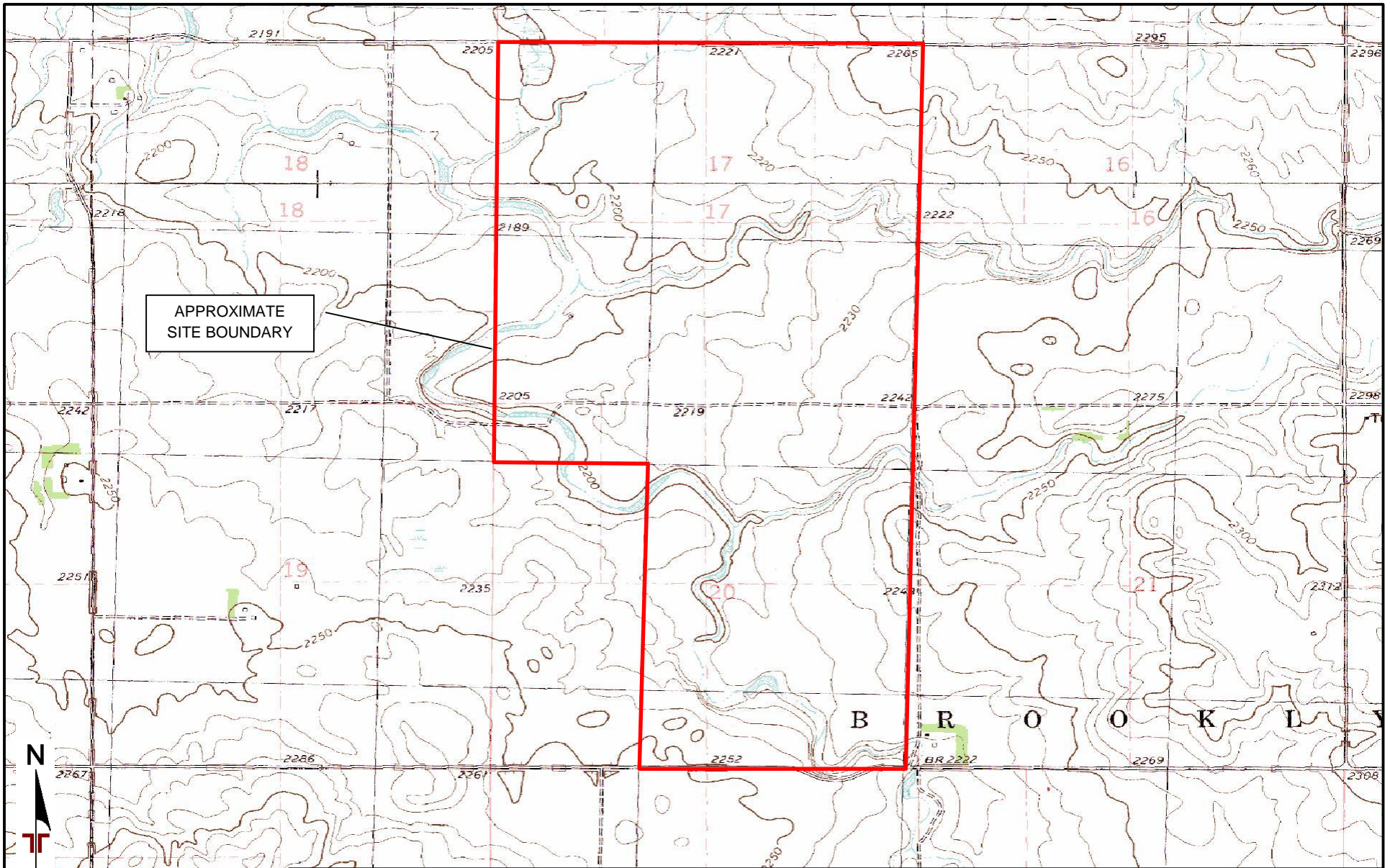
## **5.0 STANDARD OF CARE**

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time. Terracon makes no warranties, either express or implied, regarding the findings, conclusions, or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information used in the preparation of the report. These corrective action services were performed in accordance with the scope of work agreed with you, our client, as reflected in our Corrective Action Plan and were not restricted by ASTM E1903-11.

## **APPENDIX A – EXHIBITS**

Exhibit 1 – Topographic Map

Exhibit 2 – Soil Probe Location Map



APPROXIMATE  
SITE BOUNDARY



TOPOGRAPHIC MAP IMAGE COURTESY OF  
THE U.S. GEOLOGICAL SURVEY  
QUADRANGLES INCLUDE: EPPING, ND  
(1/1/1978) and GAMACHE CREEK, ND  
(1/1/1978).

DIAGRAM IS FOR GENERAL LOCATION ONLY,  
AND IS NOT INTENDED FOR CONSTRUCTION  
PURPOSES

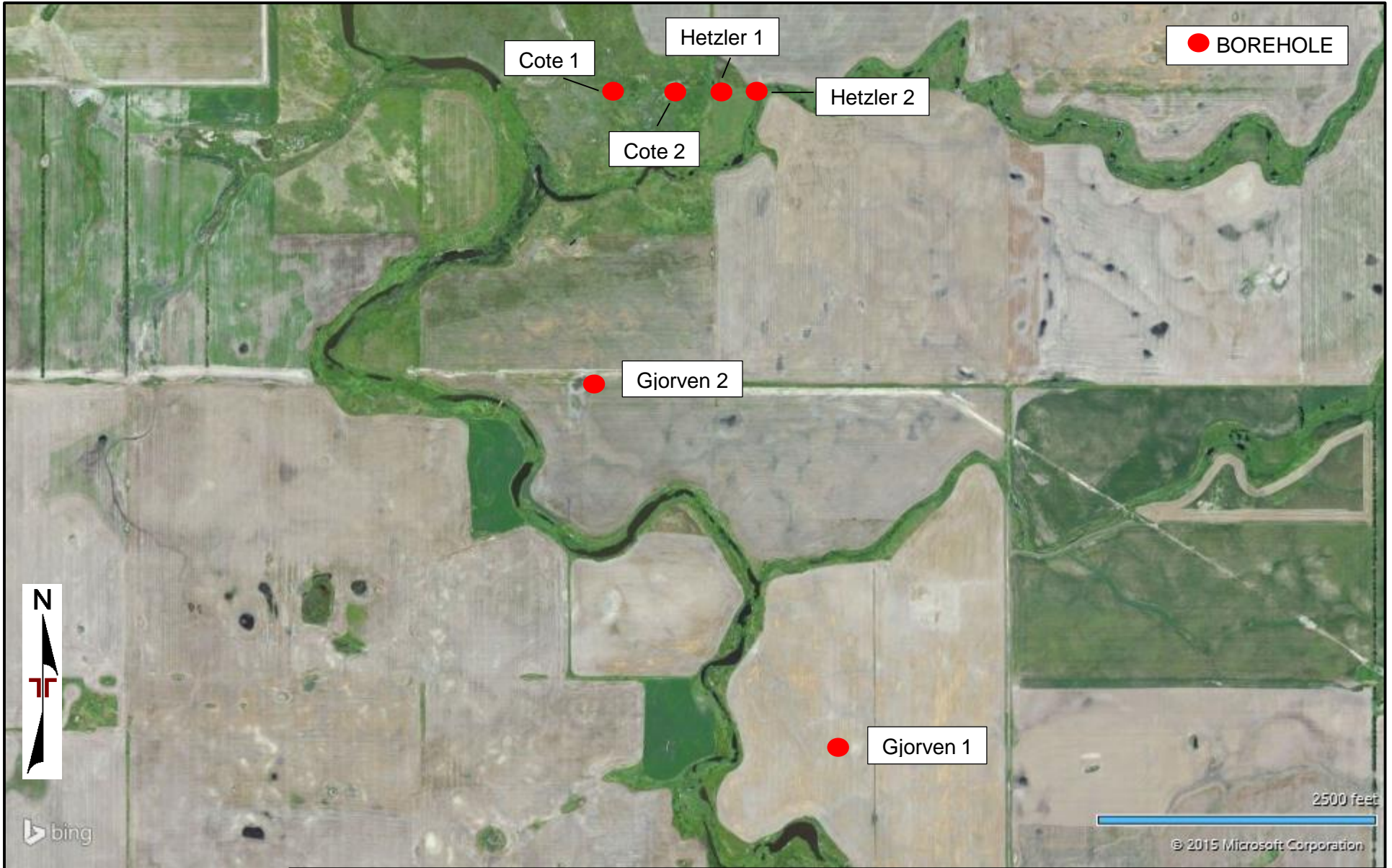
Project Manager: LHS	Project No. M6167005
Drawn by: JMF	Scale: 1"=24,000 SF
Checked by: JBE	File Name: M6167005.pdf
Approved by: DCN	Date: 4/15/16

**Terracon**  
860 9th Street NE  
West Fargo, ND 58078

TOPOGRAPHIC MAP
NDIC Site #7 S17-T155N-R98W and S20-T155N-R98W Epping, Williams County, North Dakota

Exhibit
1





bing

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager: LHS  
 Drawn by: JMF  
 Checked by: JBE  
 Approved by: DCN

Project No. M6167005  
 Scale: AS SHOWN  
 File Name: M6167005.pdf  
 Date: 4/15/16

**Terracon**  
 860 9th Street NE  
 West Fargo, ND 58078

SITE DIAGRAM

NDIC Site #7  
 S17-T155N-R98W and S20-T155N-R98W  
 Epping, Williams County, North Dakota

Exhibit

2

## **APPENDIX B – PHOTOLOG**



**Photo #1** View of borehole Gjorven 1.



**Photo #2** View of borehole Gjorven 2.



**Photo #3** View east borehole Hetzler 2



**Photo #4** View of borehole Hetzler 1.



**Photo #5** View of borehole Cote 2.



**Photo #6** View of borehole Cote 1.



**Photo #7** Probing activities to find borehole Cote 2.



**Photo #8** Probing activities to locate borehole Hetzler 1.



**Photo #9** Sealing completion of borehole Hetzler 2.



**Photo #10** Sealing completion of borehole Hetzler 1.



**Photo #11** Sealing completion of borehole Cote 2.



**Photo #12** Sealing completion of borehole Cote 1.



**Photo #13** Sealing completion of borehole Gjorven 2.



**Photo #14** Sealing completion of borehole Gjorven 1.



**Photo #15** View of dewatering activities at borehole Cote 2.



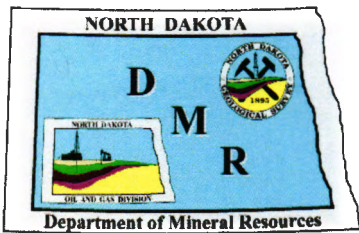
**Photo #16** View of impacts from dewatering activities at Cote 2.



**Photo #17** Reclamation of the area in proximity of Cote 2 from dewatering activities.



**Photo #18** Reclamation of the area in proximity of Cote 2 from dewatering activities.



# Department of Mineral Resources

Lynn D. Helms -- Director

North Dakota Industrial Commission

www.dmr.nd.gov

July 25, 2014

To: N.D. County Emergency Managers

Re: N.D. Oil and Gas Division – Abandoned Oil and Gas Well Plugging and Site Reclamation Fund (AWPSRF)

The members of the North Dakota Industrial Commission - Department of Mineral Resources – Oil and Gas Division (OGD) appreciate your ongoing efforts regarding the protection of the people and environment of our great State.

As you may know, the mission of the OGD is to encourage and promote the development, production, and utilization of oil and gas in the State in such a manner as will prevent waste, maximize economic recovery, and fully protect the correlative rights of all owners to the end that the landowners, the royalty owners, the producers, and the general public realize the greatest possible good from these vital natural resources.

Keeping this mission in mind, the OGD has been managing the AWPSRF for over 30 years since its creation by the legislature in 1983. We have recently created a new program team, within the OGD, that is responsible to oversee the proper reclamation of these types of sites that ***may result from the illegal dumping of oil-field waste.***

Most importantly, the fund was created and is sustained from oil and gas taxes, penalties from violations, and fees collected by the OGD. The fund is currently capped at \$75 million with \$5 million available per fiscal year. ***Funds are authorized from this fund to pay for projects in instances where no responsible party can be found.***

It is important to understand that in order for the costs of a reclamation project to be eligible for reimbursement from AWPSRF, ***an OGD field inspector must be contacted prior to the conduct of any remedial activity and provided an opportunity to visit and evaluate the site.*** The OGD has contracted with an environmental services provider who can affect the proper assessment and reclamation of these types of sites at the direction of the OGD. Attached to this letter is the contact information for our field inspection staff and their respective offices and an AWPSRF Program review diagram that is used by the OGD to evaluate the suitability of cost reimbursement.

Additional information on new rules and regulations that have been implemented in order to reduce illegal dumping incidents can be found on the OGD website at: <https://www.dmr.nd.gov/oilgas/>

Through the continued management of AWPSRF and the new rules that have been put forth by our Division we will continue to take positive and constructive steps to ensure responsible development and management of our States oil and gas resources.

Please feel free to contact our offices at any time if you have any questions about the AWPSRF program.

Respectfully,

N.D. Department of Mineral Resources:

Fred J. Anderson  
GeoTech Support Staff Officer

Funds Request / Complaint Investigation 43-02-03-54 / Discovery by Inspector / Spill Response

**AUTHORIZED USE OF FUND?**

- 1) Plug an abandoned well
- 2) Reclaim an abandoned oil and gas or injection well site, saltwater disposal pit, drilling fluid pit, or access road put into service after 7/31/1983
- 3) Reclaim an oil and gas related pipeline or associated facility put into service after 7/31/1983
- 4) Reclaim damage from an illegal dumping incident,
- 5) Compensate a mineral owner's royalty share of confiscated oil



DO NOT FUND

**LEAK OR SERIOUS THREAT?**

Well, equipment, or pipeline leak, or dumping incident is likely to cause a serious threat of pollution or injury to public health or safety



USE AWPSRF  
Unless responsible party is responding

**NO RESPONSIBLE PARTY?**

Company cannot be found, has no assets, or cannot be legally required to plug/re-plug/reclaim



COMPLAINT or  
JUDGMENT ==>  
RESPONSIBLE PARTY  
CLEANS UP, PAYS, OR  
REIMBURSES AWPSRF

**NO BOND?**

No bond or cost to plug/re-plug/reclaim exceeds the bond amount

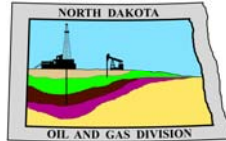


CONFISCATE BOND,  
EQUIPMENT, AND  
OIL

USE ABANDONED OIL AND GAS WELL PLUGGING AND SITE RECLAMATION FUND (AWPSRF)

**North Dakota Industrial Commission**  
**North Dakota Department of Mineral Resources**  
**North Dakota Oil & Gas Division**

**Lynn Helms**  
*Director*



**Bruce Hicks**  
*Assistant Director*

**Abandoned Oil and Gas Well Plugging and  
Site Reclamation Fund Program  
(AWPSRF)**

**Program Team Contacts:**

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*Program Fund Manager*  
*Bismarck*  
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*fjanderson@nd.gov*

**Cody Vanderbusch**  
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**Rick Hutchens**  
*Dickinson District Supervisor*  
*(701) 290-7425*  
*rhutchens@nd.gov*

**John Axtman**  
*Williston District Supervisor*  
*(701) 770-2564*  
*jaxtman@nd.gov*

**Bob Garbe**  
*Minot District Supervisor*  
*(701) 720-3262*  
*bgarbe@nd.gov*





November 18, 2015  
Revised February 8, 2016

Mr. Cody VanderBusch  
Reclamation Specialist  
NDIC Oil and Gas Division  
600 East Boulevard Avenue Dept. 405  
Bismarck, ND 58505-0840

Office 701-328-8020  
Cell 701-391-1959

Re: Corrective Action Plan  
NDIC Site #7 – E½ S20-T155N-R98W and S17-T155N-R98W  
Williams County, North Dakota  
Terracon Project No. M1157043

Dear Mr. VanderBusch:

Terracon Consultants, Inc. (Terracon) appreciates the opportunity to submit the enclosed Corrective Action Plan (CAP) for the above-referenced site. The following sections provide an outline of the project, Terracon's CAP scope of services, including schedule, and our estimated fee.

## 1.0 PROJECT INFORMATION

Terracon understands the North Dakota Industrial Commission Oil and Gas Division (NDIC) has identified the site located approximately in the E½ of Section 20 Township 155N Range 98W and Section 17 Township 155N Range 98W near Epping in Williams County, North Dakota with groundwater emanating along the annulus of abandoned boreholes causing surface impacts. Terracon further understands the boreholes are located on parcels of land owned by Mr. Rolf Gjørven. The location of the site and indications of the abandoned boreholes are depicted on Exhibits 1 and 2. Terracon understands up to seven boreholes require plugging.

If our understanding of the current site conditions is not correct, or if you have additional useful information, please let us know as soon as possible.



Terracon Consultants, Inc. 4102 7<sup>th</sup> Avenue North Fargo, North Dakota 58102  
P [701] 282-9633 F [701] 282-9635 [terracon.com](http://terracon.com)

Environmental



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Geotechnical



Materials

## **2.0 COMMITMENT TO SAFETY**

Terracon has a 100% commitment to the safety of its employees. As such, and in accordance with our *Incident and Injury Free*® safety culture, Terracon will develop a health and safety plan in conjunction with Pre-Task Planning to be used by our personnel during field services. Prior to commencement of on-site activities, Terracon will hold a meeting to review health and safety needs for this specific project. At this time, we anticipate performing fieldwork in a United States Environmental Protection Agency (USEPA) Level D work uniform consisting of hard hats, safety glasses, protective gloves, and steel-toed boots. It may become necessary to upgrade this level of protection, at additional cost, while sampling activities are being conducted in the event that petroleum or chemical constituents are encountered in soils or groundwater that present an increased risk for personal exposure.

## **3.0 SCOPE OF SERVICES**

The objective of the CAP is to seal the abandoned boreholes in accordance with North Dakota Department of Health (NDDoH) water well abandonment guidelines outlined in Article 33-18 of the North Dakota Administrative Code by restoring, as far as possible, the geological conditions which existed before the borehole was drilled. The desired product for this CAP is to decommission the boreholes to eliminate surficial physical hazards, prevent contamination of groundwater, maintain aquifer pressure head, prevent intermingling of desirable and undesirable waters, and eliminate the possibility the borehole will be used for purposes other than intended.

Following receipt of your executed Task Order and no later than 48 hours prior to intrusive activities, Terracon will contact North Dakota One Call to arrange for identification of underground utility locations at the above referenced site.

### **3.1 Location**

Terracon will locate each borehole with a preliminary search using visual inspection and physical evidence prior to using excavation equipment. Excavation will be the final procedure used to verify the location of the borehole. Excavation may be accomplished by shovel or larger equipment such as a backhoe or hydro vacuum trucks depending on success in finding the proximity of the initial site of excavation to where the borehole is discovered or excavation ceases.

### **3.2 Plugging Procedure**

Each borehole will be made free of all loose material that could cause bridging during decommissioning by over-drilling using solid/hollow stem auger or air/mud rotary drilling techniques.

## NDIC Site #7 Work Plan for Corrective Action Plan

NDIC Oil and Gas Division ■ Williams County, North Dakota

November 18, 2015, Revised February 8, 2016 ■ Terracon Project No. PM1157043



If water is present, the water in the borehole will be disinfected to 100 parts per million (ppm) chlorine concentration. A 100 ppm chlorine concentration will require two pounds of laundry bleach or 1.2 pounds of calcium hypochlorite per one thousand gallons of water.

Following completion of disinfecting activities, the borehole will be filled with an appropriate plugging material to a depth not less than three feet below grade surface. Neat cement or a cement/bentonite mixture may be used throughout the entire length of the borehole. Grout will be injected at the bottom of the hole using a pressure grouting technique or gravity-fed with a tremie pipe forcing grout and fluids present upwards. This will be done in one continuous operation in such a fashion as to prevent any voids or air pockets from forming; side-discharge *tremie*' pipe will be placed in the hole and slowly pulled up as the grout reaches the bottom of the *tremie*' pipe. Concrete or topsoil will be used as a cap for the remainder of the borehole to the surface.

Cuttings from the drilling operations will be thin spread on the site.

### 3.3 Preparation of Report

Upon completion of site activities, a report will be prepared and submitted to the North Dakota Department of Health that will include the following:

- Site plan showing pertinent site features;
- Decommissioning date;
- Personnel on hand;
- Procedures used in the field;
- Plugging materials used;
- Measurements made, depths encountered, fluids pumped,
- Analytical laboratory results;
- Field location of the borehole;
- Water quality analyses results, if any; and,
- Recommendations concerning further action, if necessary.

Terracon is prepared to commence work on this project following notification to proceed. We anticipate completing the field activities in approximately two days per borehole. The report will be available approximately ten business days upon returning from the site. This written report will reflect results, findings, and recommendations, and, as such, will take precedence over any verbal reports that Terracon personnel may have provided. The analysis, comments, and recommendations presented in the written report will be based on the information collected as discussed in this work plan.

### **3.4 General Considerations and Limitations**

Terracon's services will be performed in a manner consistent with generally accepted practices of the environmental profession. Terracon makes no warranties, expressed or implied, regarding its services, findings, conclusions or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report. These CAP services will be performed in accordance with the scope of work agreed with you, our client, as set forth in this work plan.

Findings, conclusions, and recommendations resulting from these services will be based upon information derived from on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, non-detectable, or not present during these services, and we cannot represent that the site contains no hazardous substances, toxic substances, petroleum products, or other latent conditions beyond those identified during this CAP. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations or exploratory services; the data, interpretations, findings and our recommendations are based solely upon data obtained at the time and within the scope of these services.

## **4.0 COMPENSATION**

The Scope of Services outlined in this work plan will be performed on a time and materials basis estimated at \$71,575.00. Do to the fact that there are several unknowns associated with regard to the availability of groundwater, borehole depths, and exact borehole locations at the site, a 20% contingency of \$14,315.00 has been added to the total cost. If, as a result of these services, additional work is required outside the scope of this work plan, you will be contacted, and upon request, proposed costs for additional work will be provided if costs are estimated to exceed \$85,890.00 (including 20% contingency). Client authorization will be obtained prior to commencement of any additional work outside the scope of this work plan.

**NDIC Site #7 Work Plan for Corrective Action Plan**

NDIC Oil and Gas Division ■ Williams County, North Dakota

November 18, 2015, Revised February 8, 2016 ■ Terracon Project No. PM1157043



<b>ESTIMATED COSTS</b>	
Consulting Costs (includes project management, travel and field services, and report preparation)	
Drilling Services (over-drilling, disinfecting, and plugging seven boreholes to maximum depth up to 200') and Equipment Mobilization (up to two trips)	
Location and Excavation Services (includes landscaping repair)	
Expenses	
	<b>Estimated Cost</b>
	<b>20% Contingency</b>
	<b>Total Estimated Cost</b>

Subcontractor and other direct costs include a 15% handling fee. The project is based on the scope of services outlined in this work plan. This work plan and cost estimate were prepared based on the following assumptions:

- NDIC will provide to Terracon, prior to mobilization, legal right of entry to the site (and other areas if required) to conduct the scope of services.
- NDIC will notify Terracon, prior to mobilization, of any restrictions, special site access requirements, or known potentially hazardous conditions at the site (e.g., hazardous materials or processes, specialized protective equipment requirements, unsound structural conditions, etc.).
- The estimated cost assumes that the proposed scope of work can be completed during two mobilizations due to unknowns.
- Utilities on private land that are not located by public companies will be located by property owner/operator.
- Work can be performed during normal business hours (Monday through Friday, 7:00 am to 7:00 pm).
- Traffic control services are not required.
- The site is readily accessible by truck-mounted drill rig.
- Transportation and disposal of removed soil cuttings and/or development water and other waste materials are out-of-scope services and not included in this proposal.

If any of these assumptions or conditions are not accurate or change during the project, the stated fee is subject to change. Please contact us immediately if you are aware of any inaccuracies in these assumptions and conditions, so that we may revise the work plan or fee.

**NDIC Site #7 Work Plan for Corrective Action Plan**

NDIC Oil and Gas Division ■ Williams County, North Dakota

November 18, 2015, Revised February 8, 2016 ■ Terracon Project No. PM1157043



**5.0 GENERAL COMMENTS**

The proposed scope of work will be completed under the existing Contract dated September 1, 2015 between Terracon and the State of North Dakota. This work plan is valid for 60 days from the date of this work plan. We appreciate the opportunity to provide this proposal and look forward to working with you on this project. If this work plan meets with your approval, please sign the attached Task Order and return a copy to our office via email, fax 701-282-9635, or mail to our Fargo office.

If you should have any questions or comments regarding this proposal, please contact either of the undersigned.

Sincerely,

**Terracon Consultants, Inc.**

A handwritten signature in black ink that reads "Leif H. Schonteich".

Leif H. Schonteich  
Environmental Department Manager

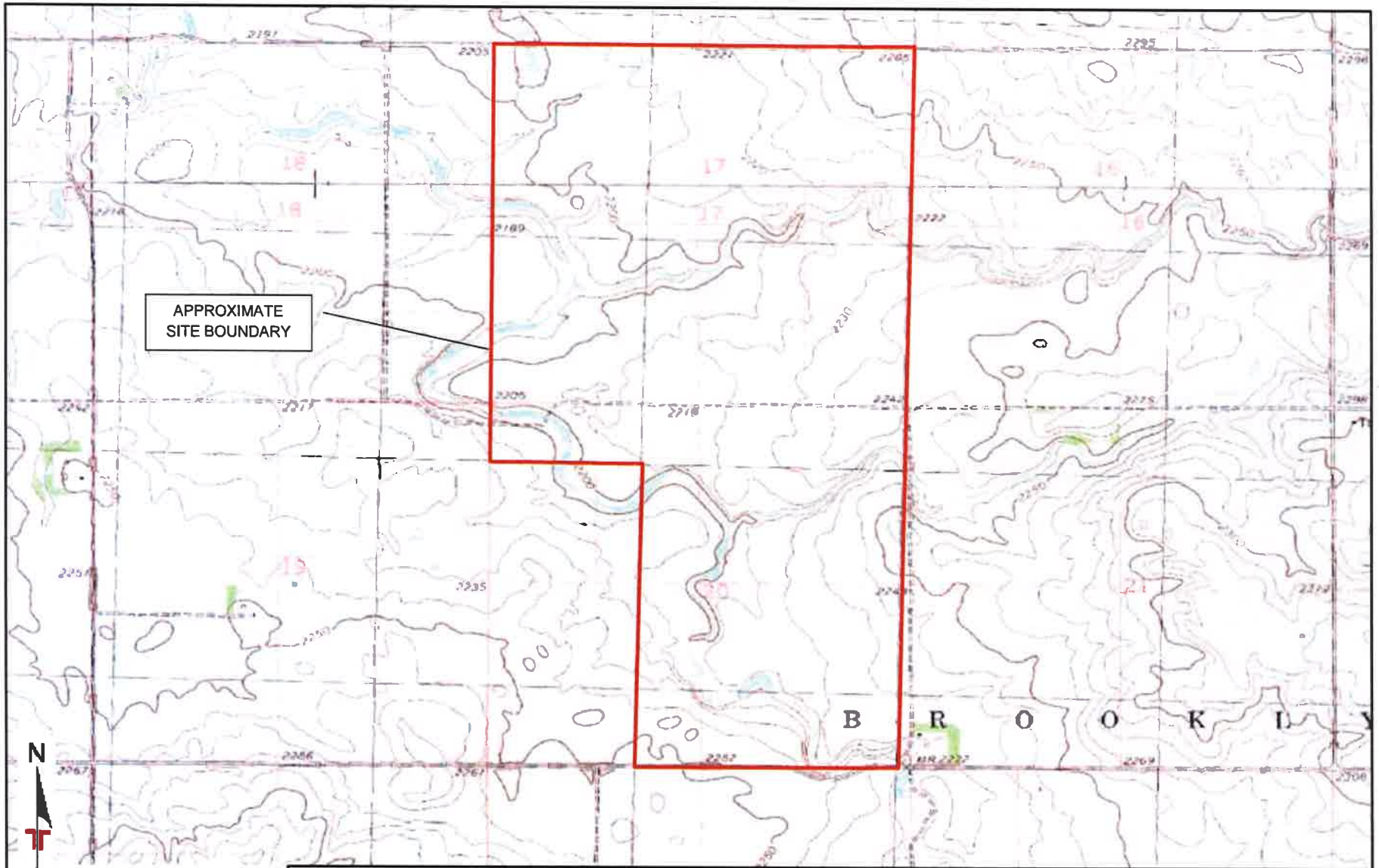
A handwritten signature in black ink that reads "Dan C. Nebel".

Dan C. Nebel, P.G.  
Principal

A handwritten signature in blue ink that reads "Jonathan B. Ellingson".

Jonathan B. Ellingson  
Fargo Office Manager

- Attachment: Task Order  
Exhibit 1 – Topographic Map  
Exhibit 2 – Site Diagram



APPROXIMATE  
SITE BOUNDARY



TOPOGRAPHIC MAP IMAGE COURTESY OF  
THE U.S. GEOLOGICAL SURVEY  
QUADRANGLES INCLUDE: EPPING, ND  
(1/1/1978) and GAMACHE CREEK, ND  
(1/1/1978).

DIAGRAM IS FOR GENERAL LOCATION ONLY,  
AND IS NOT INTENDED FOR CONSTRUCTION  
PURPOSES

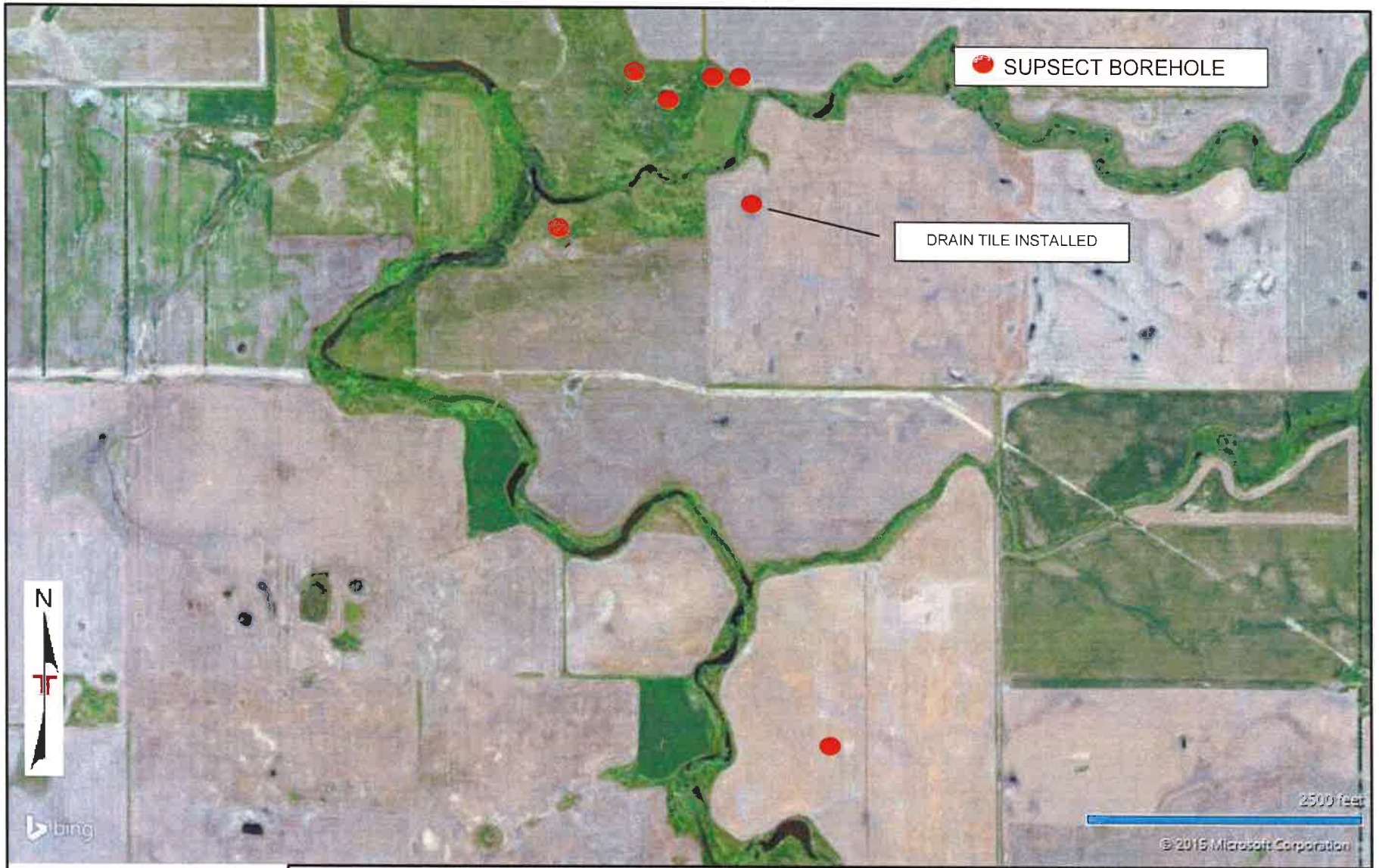
Project Manager: LHS  
Drawn by: LHS  
Checked by: JBE  
Approved by: DCN

Project No. M1157043  
Scale: 1"=24,000 SF  
File Name: NDIC7.pdf  
Date: 10/16/15

**Terracon**  
4102 7<sup>th</sup> Avenue North  
Fargo, ND 58102-2923

TOPOGRAPHIC MAP  
NDIC Site #7  
E½ S20-T155N-R98W and S17-T155N-R98W  
Epping, Williams County, North Dakota

Exhibit  
1



AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager: LHS  
 Drawn by: LHS  
 Checked by: JBE  
 Approved by: DCN

Project No. M1157043  
 Scale: AS SHOWN  
 File Name: NDIC7.pdf  
 Date: 10/16/15

**Terracon**  
 4102 7<sup>th</sup> Avenue North  
 Fargo, ND 58102-2923

SITE DIAGRAM  
 NDIC Site #7  
 E½ S20-T155N-R98W and S17-T155N-R98W  
 Epping, Williams County, North Dakota

Exhibit  
 2



## MASTER SERVICES AGREEMENT

### TASK ORDER

This **TASK ORDER** is issued under the **MASTER SERVICES AGREEMENT** (dated 09/01/2015, agreement reference number 110.7-15-004) between State of North Dakota ("Client") and Terracon Consultants, Inc. ("Consultant") for Services to be provided by Consultant for Client on the NDIC Site #7 project ("Project"), as described in the Project Information section of the Consultant's Task Order Proposal dated 11/18/2015, revised 02/05/16 ("Task Order Proposal") unless the Project is otherwise described below or in Exhibit A to this Task Order (which section or Exhibit are incorporated into this Task Order). This Task Order is incorporated into and part of the Master Services Agreement.

#### 1. Project Information

See Corrective Action Plan (Terracon Project No. M1157043) dated November 18, 2015, revised February 5, 2016.

#### 2. Scope of Services

The scope of Services to be provided under this Task Order are described in the Scope of Services section of the Consultant's Task Order Proposal, unless Services are otherwise described below or in Exhibit B to this Task Order.

See Corrective Action Plan (Terracon Project No. M1157043) dated November 18, 2015, revised February 5, 2016.

#### 3. Compensation

Client shall pay compensation for the Services performed at the fees stated in the Task Order Proposal unless fees are otherwise stated below or in Exhibit C to this Task Order.

See Corrective Action Plan (Terracon Project No. M1157043) dated November 18, 2015, revised February 5, 2016.

All terms and conditions of the **Master Services Agreement** shall continue in full force and effect. This Task Order is accepted and Consultant is authorized to proceed.

Consultant: Terracon Consultants, Inc.  
By: Leif H. Schonteich Date: 2/5/2016  
Name/Title: Leif H. Schonteich / Environmental  
Department Manager  
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Fargo, ND 58102-2923  
Phone: (701) 282-9633 Fax: (701) 282-9635  
Email: Leif.Schonteich@terracon.com

Client: State of North Dakota  
By: \_\_\_\_\_ Date: \_\_\_\_\_  
Name/Title: Cody VanderBusch / Reclamation Specialist  
Address: 600 East Boulevard Ave Dept 405  
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Email: cwvanderbusch@nd.gov

Reference Number: M1157042