



# GEOPHYSICAL EXPLORATION COMPLETION REPORT - FORM GE 6A

INDUSTRIAL COMMISSION OF NORTH DAKOTA  
OIL AND GAS DIVISION  
600 EAST BOULEVARD DEPT 405  
BISMARCK, ND 58505-0840  
SFN 51456 (03-2011)

Permit No. <b>97-0309</b>	
Shot Hole Operations	*Non-Explosive Operations <b>Vibroseis</b>

## SECTION 1

Geophysical Contractor <b>Paragon Geophysical Services</b>	
Project Name and Number <b>RTE VSP 3D</b>	County(s) <b>Stark</b>
Township(s) <b>139 North</b>	Range(s) <b>92 West</b>
Drilling and Plugging Contractors <b>N/A</b>	
Date Commenced <b>Feb 10, 2022</b>	Date Completed <b>Feb 15, 2022</b>

## SECTION 2

First S.P. # <b>100101</b>	Last S.P. # <b>116122</b>											
Loaded Holes (Undetonated Shot Points) <b>N/A</b>												
S.P.#s												
Charge Size												
Depth												
Reasons Holes Were Not Shot <b>N/A</b>												

## SECTION 3

Flowing Holes and/or Blowouts S.P.#s <b>N/A</b>
Procedure for Plugging Flowing Holes and/or Blowouts <b>N/A</b>
Include a 7.5 minute USGS topographic quadrangle map or a computer generated post-plot facsimile of the approximate scale displaying each individual shot hole, SP #, line #, and legal location.

\*Non-Explosive Operations - Complete Section 1 and Affidavit (Form GE 6B).



**GEOPHYSICAL EXPLORATION AFFIDAVIT OF COMPLETION REPORT - FORM GE 6B**  
 INDUSTRIAL COMMISSION OF NORTH DAKOTA  
 OIL AND GAS DIVISION  
 600 EAST BOULEVARD DEPT 405  
 BISMARCK, ND 58505-084C  
 SFN 51456 (03-2011)

PERMIT NAME (Required): RTE VSP 3D

PERMIT NUMBER: 97-0309

**AFFIDAVIT OF COMPLETION (GEOPHYSICAL CONTRACTOR)**

STATE OF Kansas )

COUNTY OF Sedgwick )

Before me, Rheanna Kaneer, a Notary Public in and for the said  
 County and State, this day personally appeared Aaron Bateman  
 who being first duly sworn, deposes and says that (s)he is employed by Paragon Geophysical Services

\_\_\_\_\_ , that (s)he has read North Dakota  
 Century Code Section 38-08.1, that the foregoing seismic project has been completed in  
 accordance with North Dakota Administrative Code Rule 43-02-12 and that the statements on  
 the reverse side of this document are true.

Ra Bateman  
 Geophysical Contractor Representative

Subscribed in my presence and sworn before me this 29<sup>th</sup> day of February, 2022.

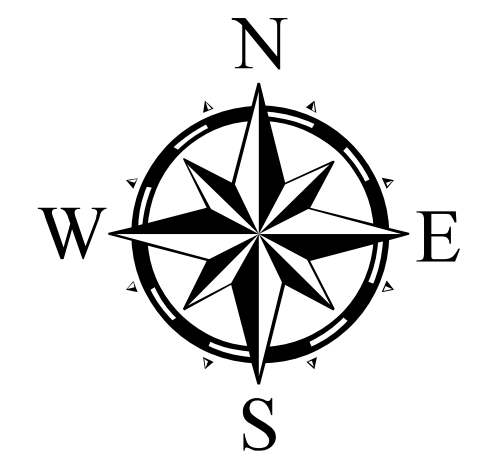


Notary Public [Signature]

My Commission Expires 9/29/2025

# RTE VSP 3-D

Date: 2/9/2022



◆ RTE_Post_VSP_NAD83M	— NewFlwLine
— RedTrailEnergy_lines	■ NAD_83_MERGE_BUFFER_Dissolve
★ MonitorWell	□ Outline
★ InjecWell	





February 8, 2022

Aaron Bateman  
President  
Paragon Geophysical Services, Inc.  
3500 N. Rock Rd., Bldg 800, Ste B  
Wichita, KS 67226

RE: RTE VSP 3-D  
GEOPHYSICAL EXPLORATION PERMIT #97-0309  
STARK COUNTY  
NON-EXPLOSIVE METHODS

Dear Mr. Bateman:

Be advised that your Geophysical Exploration permit is conditionally approved; effective for one year from February 8, 2022.

**PERMIT STIPULATIONS:**

- **PURSUANT TO NDAC 43-02-12-05 (DISTANCE RESTRICTION)**
  - **Non-explosive exploration methods may not be conducted less than 300 feet from water wells, buildings, underground cisterns, pipelines, and flowing springs.**
- **In addition, pursuant to NDAC 43-02-12-06 (NOTIFICATION OF WORK PERFORMED), “The director is authorized to suspend operations of the entire geophysical project, or any portion thereof, if further activity will cause excessive damage to the surface of the land”.**

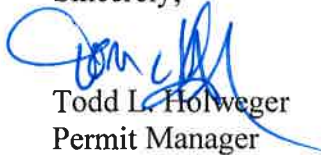
Review the following conditions for your permit:

1. A pre-program meeting with state seismic inspector Tom Torstenson is required. You must contact him at 701-290-1546 (cell) or 701-227-7436 at least 24 hours prior to any exploration operations. Also, a copy of the entire permit is required for all contractors at the pre-program meeting.
2. All variances for distance restrictions are to be furnished, and a pre-plot map displaying any source points that do not comply with the distance restriction rule must be supplied to the inspector.
3. The following information must be submitted within 30 days of the completion of the project by the Geophysical Company:
  - a. Completion Report,

- b. Completion Affidavit,
  - c. Post Plot Map. It must show all water wells, buildings, underground cisterns, pipelines, and flowing springs that fall within the program area and within one half mile of the perimeter of the program.
  - d. Must provide a GIS layer using NAD83 in an Esri shape file format and an Image file (.img) on a Flash Drive or email: [tstenson@nd.gov](mailto:tstenson@nd.gov) with all source and receiver points,
4. The permit agent shall notify the operator of the land at least seven days before commencement of any geophysical exploration activity, unless waived by mutual agreement of both parties. The notice must include the approximate time schedule and the location of the planned activity.
  5. Information regarding the location of water wells, springs, etc.; refer to the following ND State Water Commission Mapservice website, at: <http://mapservice.swc.state.nd.us/>
  6. The entire permit can be viewed, as well as the status of various seismic projects in the state, at: <https://www.dmr.nd.gov/oilgas/seismic/seismicstats.asp>

Should you have any questions regarding this matter, feel free to contact me at 701-328-8020, or Tom Torstenson at the number listed in paragraph 1.

Sincerely,



Todd L. Holweger  
Permit Manager



# GEOPHYSICAL EXPLORATION PERMIT - FORM GE 1

INDUSTRIAL COMMISSION OF NORTH DAKOTA  
OIL AND GAS DIVISION  
600 EAST BOULEVARD DEPT 405  
BISMARCK, ND 58505-0840  
SFN 51459 (03-2011)

Received

FEB - 7 2022

ND Oil & Gas  
Division

1) a. Company <b>Paragon Geophysical Services</b>		Address <b>3500 N Rock Road. Bldg 800 Suite B Wichita KS 67266</b>	
Contact <b>Aaron Bateman</b>		Telephone <b>316.636.5552</b>	Fax <b>316.636.5572</b>
Surety Company <b>Arch Insurance</b>		Bond Amount <b>\$50,000.00</b>	Bond Number <b>SU1135989</b>
2) a. Subcontractor(s) <b>N/A</b>		Address	
b. Subcontractor(s) <b>N/A</b>		Address	
3) Party Manager <b>Adrian Sanchez</b>		Address (local)	
4) Project Name or Line Numbers <b>RTE VSP 3-D</b>		Telephone (local) <b>970.739.7350</b>	
5) Exploration Method (Shot Hole, Non-Explosive, 2D, 3D, Other) <b>Non-Explosive Vibroseis</b>			
6) Distance Restrictions (Must check all that apply)			
<input checked="" type="checkbox"/> 300 feet - NonExplosive - Distance setbacks apply to water wells, buildings, underground cisterns, pipelines, and flowing springs.			
<input type="checkbox"/> 660 feet - Shot Hole - Distance setbacks apply to water wells, buildings, underground cisterns, pipelines, and flowing springs.			
7) Size of Hole <b>3-D N/A</b>	Amt of Charge <b>N/A</b>	Depth <b>N/A</b>	Source points per sq. mi. <b>542</b>
			No. of sq. mi. <b>.688 Sq. Mi.</b>
Size of Hole <b>2-D</b>	Amt of Charge	Depth	Source points per ln. mi.
			No. of ln. mi.
8) Approximate Start Date <b>February 15, 2022</b>		Approximate Completion Date <b>February 28, 2022</b>	

THE COMMISSION MUST BE NOTIFIED AT LEAST 24 HOURS IN ADVANCE OF COMMENCEMENT OF GEOPHYSICAL OPERATIONS

9) Location of Proposed Project - County <b>Stark</b>			
Section(s), Township(s) & Range(s)	Section	T.	R.
	<b>4</b>	<b>139</b>	<b>92</b>
	Section	T.	R.
	<b>9</b>	<b>139</b>	<b>92</b>
	Section	T.	R.
	<b>10</b>	<b>139</b>	<b>92</b>
Section	T.	R.	
Section	T.	R.	

I hereby swear or affirm that the information provided is true, complete and correct as determined from all available records.			Date <b>Feb 2, 2022</b>
Signature 	Printed Name <b>Bruce Fulker</b>	Title <b>Authorized Agent for Paragon</b>	
Email Address(es) <b>bfulker@cougarlandservices.net</b>			

(This space for State office use)		<p align="center"><b>Permit Conditions</b></p> <ul style="list-style-type: none"> <li>* Permit in hand required at pre-program meeting with field inspector and be aware of all NDIC Rules and Regulations (i.e. distance restrictions).</li> <li>* See attached letter.</li> </ul>
Permit No. <b>97-0309</b>	Approval Date <b>2/8/22</b>	
Approved by 		
Title <b>Mineral Resources Permit Manager</b>		



February 8, 2022

The Honorable Karen Richard  
Stark County Auditor  
P.O. Box 130  
Dickinson, ND 58602-0130

RE: Geophysical Exploration  
Permit #97-0309

Dear Ms. Richard:

Pursuant to Section 38-08.1-04.2 of the North Dakota Century Code, please be advised that Paragon Geophysical Services, Inc. was issued the above captioned permit on February 8, 2022, and will remain in effect for a period of one year. The entire permit can be viewed on our website at: <https://www.dmr.nd.gov/oilgas/seismic/seismicstats.asp>

Should you have any questions, please contact our office.

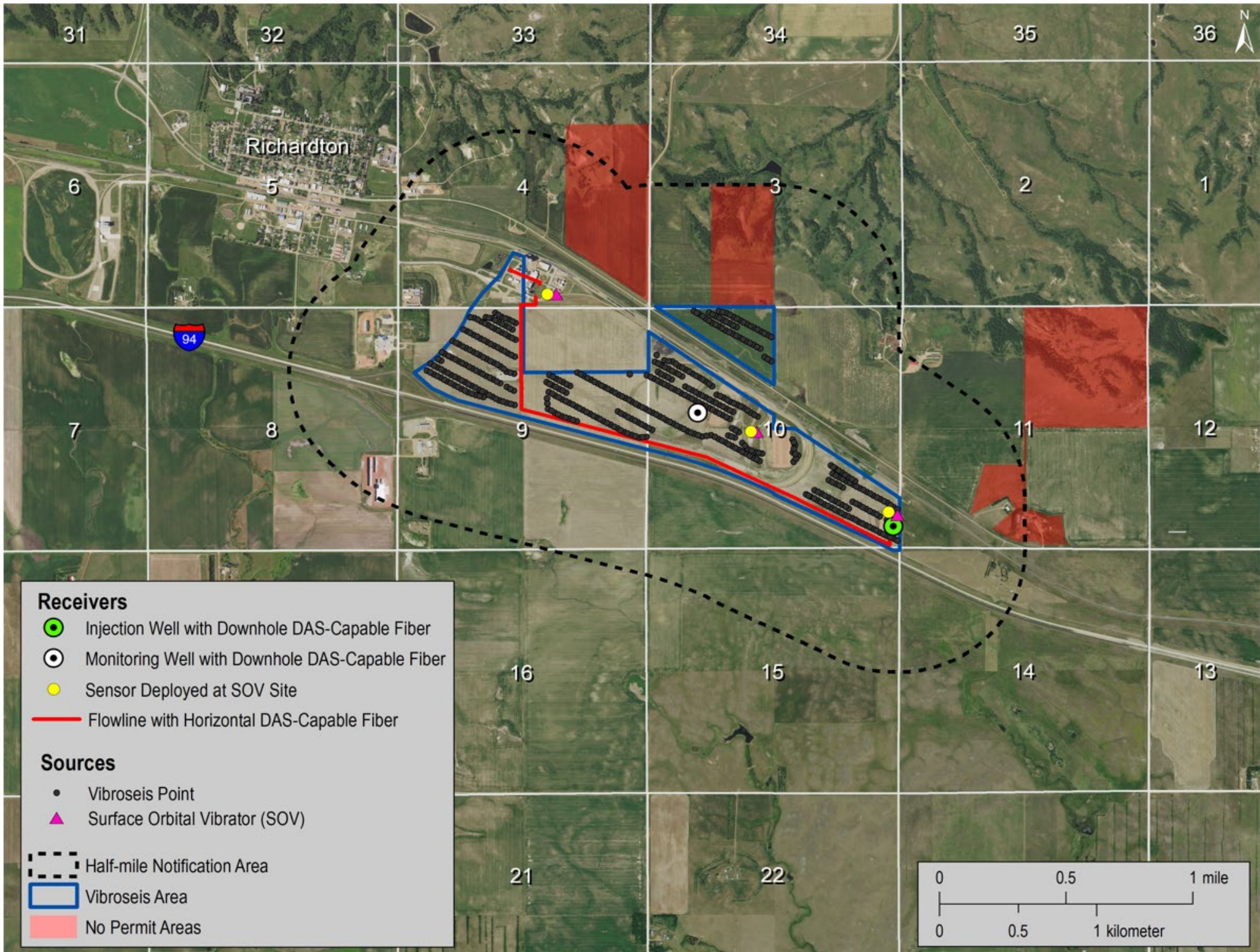
Sincerely,

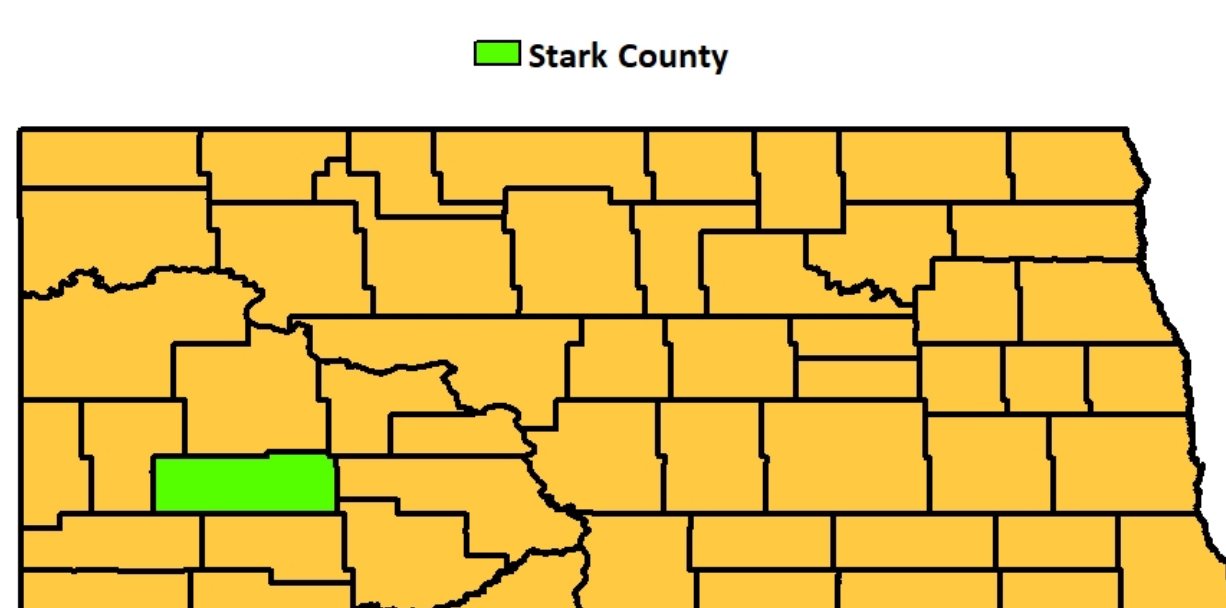
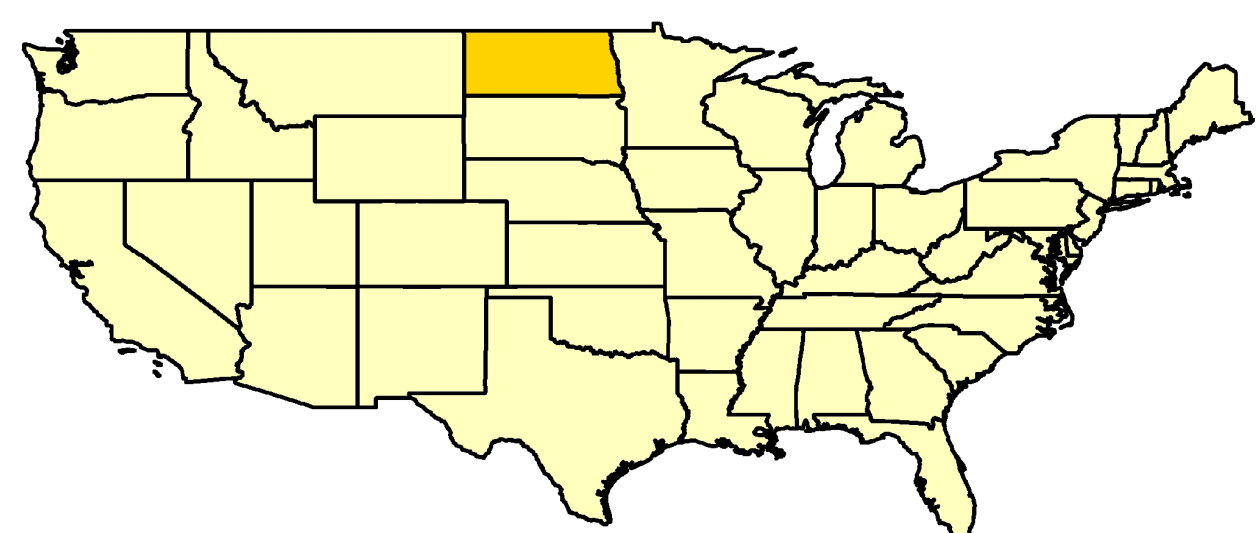
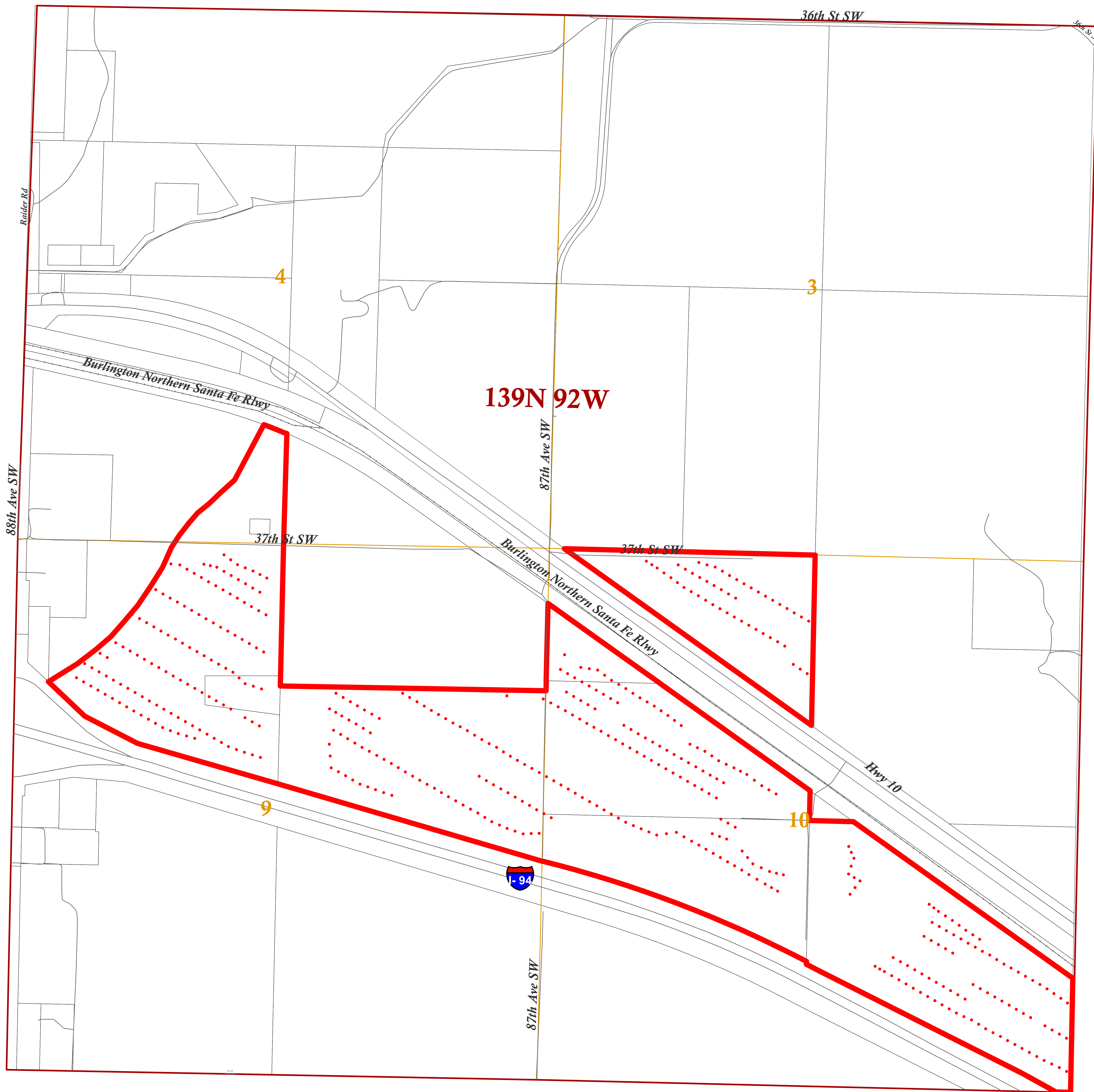
A handwritten signature in blue ink, appearing to read "Todd L. Holweger".

Todd L. Holweger  
Permit manager





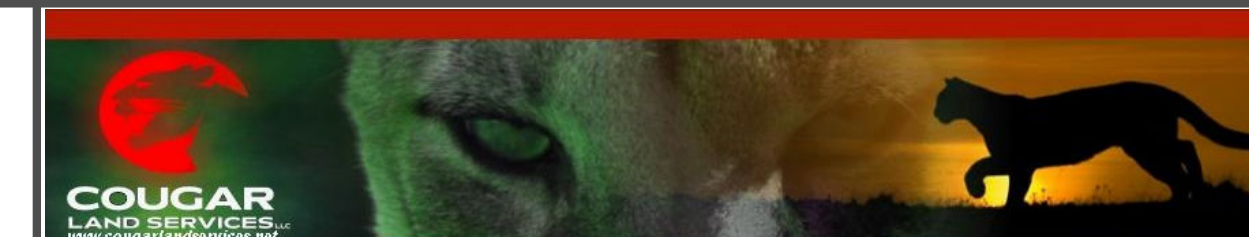




# RTE-VSP Surface Map

February 02, 2022

- Legend**
- Vibroseis
  - Roads
  - Rail
  - Outline
  - Townships
  - Sections



State Plane  
North Dakota South  
NAD 27  
Scale 1:4,500

**Area Of Interest**  
0.688 Square Miles  
440.32 Acres  
Stark County  
North Dakota

This map has been carefully prepared from official records, maps, engineering data, photographs and/or other information, which is provided as a courtesy only. We make no warranties as to its completeness or accuracy, whether expressed or implied.



A crew from Paragon Geophysical Services, Inc. will be collecting information on subsurface rock layers at the Red Trail Energy (RTE) ethanol plant near Richardton, North Dakota, beginning February 10–28. Paragon is working in cooperation with RTE under a state permit approved by the North Dakota Industrial Commission and with the knowledge of the Richardton City Commissioners. All work will be limited to land owned by RTE. Care will be taken to avoid or minimize any environmental impacts and maintain normal traffic flow.

The survey will encompass about 1 square mile of RTE land surrounding the ethanol plant, avoiding railroad and highway rights-of-way. The test involves a network of previously installed sensors and two source trucks (called vibroseis trucks). The survey crew will drive the trucks in parallel lines on RTE land and stop at intervals to vibrate the ground for 1–2 minutes. A person standing 100 feet from the source will not feel ground vibration. The trucks will not operate within 300 feet of buildings and other infrastructure, in accordance with the state permit. Geophysical surveys are a common data collection tool and have been used in every county in western North Dakota, including a previous survey carried out at this site in early 2019.

The geophysical survey is being conducted as part of the RTE CCS (carbon capture and storage) project to make its ethanol more valuable by investigating techniques to reduce carbon dioxide emissions from ethanol production. RTE is working on the project with the University of North Dakota's Energy & Environmental Research Center (EERC), whose research at the site is investigating the efficacy of low-impact techniques to monitor commercial-scale geologic storage for carbon dioxide. Engineers and scientists at the EERC will combine the geologic information collected in both geophysical surveys to establish baseline conditions for the monitoring data to be collected as part of the low-impact study.

More information about the RTE CCS project is available at <https://undeerc.org/RedTrailEnergy/>.



# North Dakota Industrial Commission

## Department of Mineral Resources

### Oil & Gas Division

**FORM GE 1**  
**FILING AUTHORIZATION**

**COMPANY NAME:** Paragon Geophysical Services, Inc.

**ADDRESS:** 3500 North Rock Road Bldg 800 Suite B

**CITY:** Wichita **STATE:** KS **ZIP:** 67226

This form authorizes the person(s) listed below to submit a NDIC Geophysical Exploration Permit – Form GE 1 for approval on behalf of the designated company as listed above.

A new authorization will be required if any changes are to be made to the authorized individuals on the form.

The data submitted from the authorized individuals listed below have been checked and conform to the standards and procedures set forth by the NDIC Department of Mineral Resources.

The authorized individual(s) will ensure that the company, as listed above, and party manager receive a copy of the approved Form GE 1

<u>Authorized Individuals</u>	<u>Phone Number</u>	<u>E-Mail Address</u>
Bruce Fulker	713.806.2024	bfulker@cougarlandservices.net

Company Authorized Signature: RA Bateman Date: September 28, 2021

Printed Name: Aaron Bateman Title: President

Phone: (316) 636-5552 Email Address: abateman@paragongeo.com

\*\*\*\*\*

Witness Signature: Royce Hammer Date: 9/28/2021

Witness Printed Name: Royce Hammer