



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. 97-0316	
Shot Hole Operations N/A	*Non-Explosive Operations Vibroseis

SECTION 1

Geophysical Contractor Paragon Geophysical Services, Inc.	
Project Name and Number RTE TIME LAPSE VSP	County(s) Stark
Township(s) 139 North	Range(s) 92 West
Drilling and Plugging Contractors N/A	
Date Commenced March 6, 2023	Date Completed March 7, 2023

SECTION 2

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

SECTION 3

Flowing Holes and/or Blowouts S.P.#s N/A
Procedure for Plugging Flowing Holes and/or Blowouts N/A
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 58505-0840
SFN 51456 (03-2011)

PERMIT NAME (Required): RTE Time Lapse VSP

PERMIT NUMBER: 97-0316

AFFIDAVIT OF COMPLETION (GEOPHYSICAL CONTRACTOR)

STATE OF Kansas)

)

COUNTY OF Sedgwick)

Before me, David Rich, 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, Inc., that (s)he has read North Dakota

Century Code Section 38-08.1, that the foregoing seismic project has been completed in

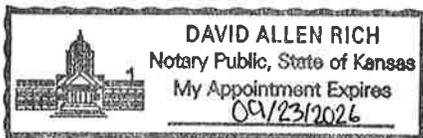
accordance with North Dakota Administrative Code Rule 43-02-12 and that the statements on

the reverse side of this document are true.

Aaron Bateman

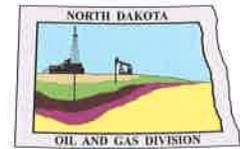
Geophysical Contractor Representative

Subscribed in my presence and sworn before me this 20th day of March, 2023.



Notary Public David Rich

My Commission Expires 09/23/2026



February 24, 2023

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

RE: RTE TIME LAPSE VSP
GEOPHYSICAL EXPLORATION PERMIT #97-0316
STARK COUNTY
NON-EXPLOSIVE METHODS

Dear Mr. Bateman:

Be advised that your Geophysical Exploration permit is conditionally approved; effective for one year from February 24, 2023.

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".

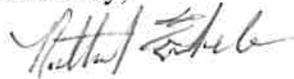
Review the following conditions for your permit:

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: tstorstenson@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,



Nathaniel Erbele
NDIC Permitting



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 17 2023
 N.D. INDUSTRIAL COMMISSION

1) a. Company Paragon Geophysical Services		Address 3500 N Rock Road , Bldg 600 Suite B Wichita KS 67226			
Contact Aaron Bateman		Telephone (316) 636-5552		Fax (316) 636-5572	
Surety Company Arch Insurance		Bond Amount \$50,000.00		Bond Number SU1135989	
2) a. Subcontractor(s) N/A		Address		Telephone	
b. Subcontractor(s) N/A		Address		Telephone	
3) Party Manager Jimmy Blackstone		Address (local)		Telephone (local) (806) 471-8340	
4) Project Name or Line Numbers RTE Time Lapse VSP					
5) Exploration Method (Shot Hole, Non-Explosive, 2D, 3D, Other) Non Explosive Vibroseis					
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 3-D N/A	Amt of Charge N/A	Depth N/A	Source points per sq. mi. 582	No. of sq. mi. .688 sq.ml	
Size of Hole 2-D	Amt of Charge	Depth	Source points per ln. mi.	No. of ln. mi.	
8) Approximate Start Date February 28, 2023			Approximate Completion Date March 20, 2023		

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

9) Location of Proposed Project - County Stark						
Section(s), Township(s) & Range(s)	Section	4	T.	139	R.	92
	Section	9	T.	139	R.	92
	Section	10	T.	139	R.	92
	Section		T.		R.	
	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 **02/13/2023**

Signature <i>Ra Bateman</i>	Printed Name Aaron Bateman	Title President
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Email Address(es)
abateman@paragongeo.com

(This space for State office use)		<p>Permit Conditions</p> <p>* Permit in hand required at pre-program meeting with field inspector and be aware of all NDIC Rules and Regulations (i.e. distance restrictions).</p> <p>* See attached letter.</p>
Permit No. 97-0316	Approval Date 2/23/23	
Approved by <i>Matthew Zichler</i>		
Title <i>Petroleum Engineer</i>		



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 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/>.

The plan is to run the VSP annually until 1 million tonnes of CO₂ is injected into storage.

Rd Bateman

Richardson

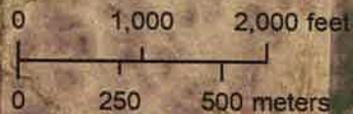
Receivers

- Injection Well with Downhole DAS-Capable Fiber
- ⊙ Monitoring Well with Downhole DAS-Capable Fiber
- Flowline with Horizontal DAS-Capable Fiber

Sources

- Vibroseis Point

⊞ Half-mile Notification Area



M0767



RED TRAIL ENERGY, LLC

“Our Farms, Our Fuel, Our Future”

PO Box 11 Richardton, ND 58652 (701)-974-3308 FAX (701)-974-3309

February 24th, 2023

Mr. Todd L. Holweger
Permit Manager/Geophysical Supervisor
North Dakota Industrial Commission Oil and Gas Division
600 East Boulevard Avenue, Department 405
Bismarck, ND 58505

Dear Mr. Holweger:

Subject: Geophysical Exploration Permit Affidavit

All landowners within the proposed RTE Time Lapse VSP project have been notified of the approximate schedule and location of the project and provided a written copy of North Dakota Century Code (NDCC) Section 38-08.1 1-4.1

(Exploration Permit) and NDCC Chapter 38-11.1 (Oil & Gas Production Damage Compensation). As required by NDCC Section 38-08.1-4.1 (4), landowners within ½ mile of the proposed project area, were provided written copies of the required NDCC Sections which includes the Stark County Highway Department and BNSF Railway Company, which have authority over lands adjacent to study area. Richardton City Council President Tom Roll was provided notification of the project.

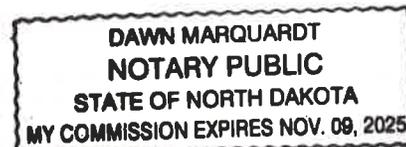
The proposed project will not place sensors on state roadways, railways, and associated rights-of-way. The RITE fiber on the injection wellbore is the sensor for the project.

The project's updated tentative start date is Monday March 6th. If weather conditions or field conditions change the date may move.

Please contact me by phone with any questions at 701-226-8748 or email at daveb@redtrailenergy.com

Sincerely,

David Burns
Regulatory & Compliance Manager
Red Trail Energy, LLC





February 24, 2023

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

RE: Geophysical Exploration
Permit #97-0316

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 24, 2023, 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 black ink that reads "Nathaniel Erbele".

Nathaniel Erbele
NDIC Permitting