



# 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>97-0318</b>	
Shot Hole Operations <b>N/A</b>	*Non-Explosive Operations <b>Vibroseis</b>

## SECTION 1

Geophysical Contractor <b>Paragon Geophysical Services, Inc.</b>	
Project Name and Number <b>DSA 2-D Stutsman Phase I</b>	County(s) <b>Stutsman</b>
Township(s) <b>138- 139 North</b>	Range(s) <b>69 West</b>
Drilling and Plugging Contractors <b>N/A</b>	
Date Commenced <b>March 13, 2023</b>	Date Completed <b>March 14, 2023</b>

## SECTION 2

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

## 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 58505-0840  
SFN 51456 (03-2011)

PERMIT NAME (Required): DSA 2-D Stutsman Phase 1

PERMIT NUMBER: 97-0318

**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.

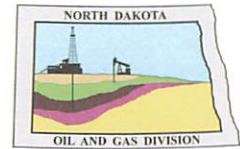
Rd Bateman  
Geophysical Contractor Representative

Subscribed in my presence and sworn before me this 20<sup>th</sup> day of March, 2023



Notary Public David Rich

My Commission Expires 09/23/2026



March 10, 2023

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

RE: DSA 2-D STUTSMAN PHASE I  
GEOPHYSICAL EXPLORATION PERMIT #97-0318  
STUTSMAN COUNTY  
NON-EXPLOSIVE METHODS

Dear Mr. Bateman:

Be advised that your Geophysical Exploration permit is conditionally approved; effective for one year from March 10, 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,

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](mailto: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,



Todd L. Holweger  
Permit Manager/Geophysical Supervisor





# 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 27 2023

ND Oil & Gas  
Division

1) a. Company <b>Paragon Geophysical Services Inc.</b>		Address <b>3500 N. Rock Road. Bldg. 800 Ste B Wichita, KS 67226</b>			
Contact <b>Aaron Bateman</b>		Telephone <b>316.636.5552</b>		Fax	
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		Telephone	
b. Subcontractor(s)		Address		Telephone	
3) Party Manager <b>Chad Hall</b>		Address (local)		Telephone (local) <b>251.227.5163</b>	
4) Project Name or Line Numbers <b>DSA 2D Stutsman Phase I</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	Amt of Charge	Depth	Source points per sq. mi.	No. of sq. mi.	
3-D	n/a	na/			
Size of Hole	Amt of Charge	Depth	Source points per ln. mi.	No. of ln. mi.	
2-D	n/a	n/a	64	9.855	
8) Approximate Start Date <b>March 08.2023</b>			Approximate Completion Date <b>March 31, 2023</b>		

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

9) Location of Proposed Project - County <b>Stutsman County (See Attached "Exhibit A" For Township - Range - Sections)*</b>			
Section(s), Township(s) & Range(s)	Section	T.	R.
	Section	T.	R.
	Section	T.	R.
	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 <b>February 27, 2023</b>
Signature 	Printed Name <b>Bruce Fulker</b>	Title <b>Authorized Agent for Paragon</b>
Email Address(es) bfulker@cougarlandservices.net		

(This space for State office use)		<p align="center"><b>Permit Conditions</b></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. <b>97-0318</b>	Approval Date <b>3/10/23</b>	
Approved by 	Title <b>Mineral Resources Permit Manager</b>	

\*See Instructions On Reverse Side

 Exhibit "A"

**Geophysical Exploration Permit Form GE 1**

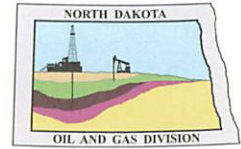
**DSA 2D Stutsman Phase 1**

**Stutsman County**

**Paragon Geophysical Services, Inc.**

**Township 139 N Range 69 West: Sections 15.16.21.22.27.28.33.34**

**Township 138 N Range 69 West: Sections 2.3.4.5.6.7.8.9.10.11**



March 10, 2023

The Honorable Jessica Alonge  
511 2nd Ave. SE,  
Ste 102  
Jamestown, ND 58401-4298

RE: Geophysical Exploration  
Permit # 97-0318

Dear Ms. Alonge,:

Pursuant to Section 38-08.1-04.2 of the North Dakota Century Code, please be advised that the Paragon Geophysical Services, Inc. was issued the above captioned permit on March 10, 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>

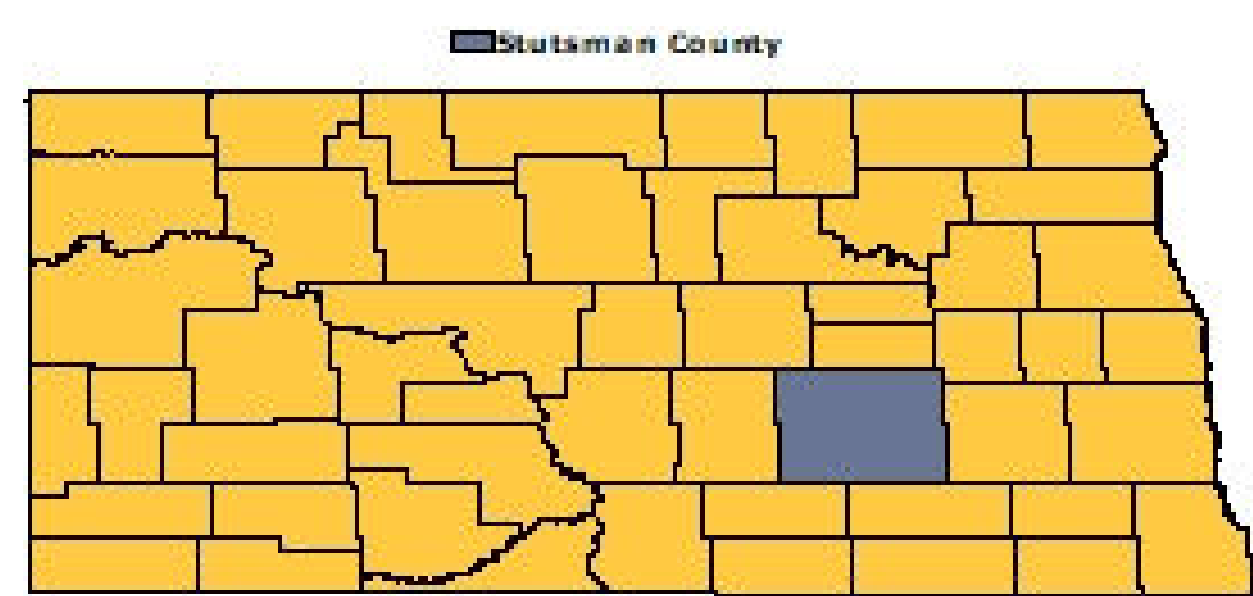
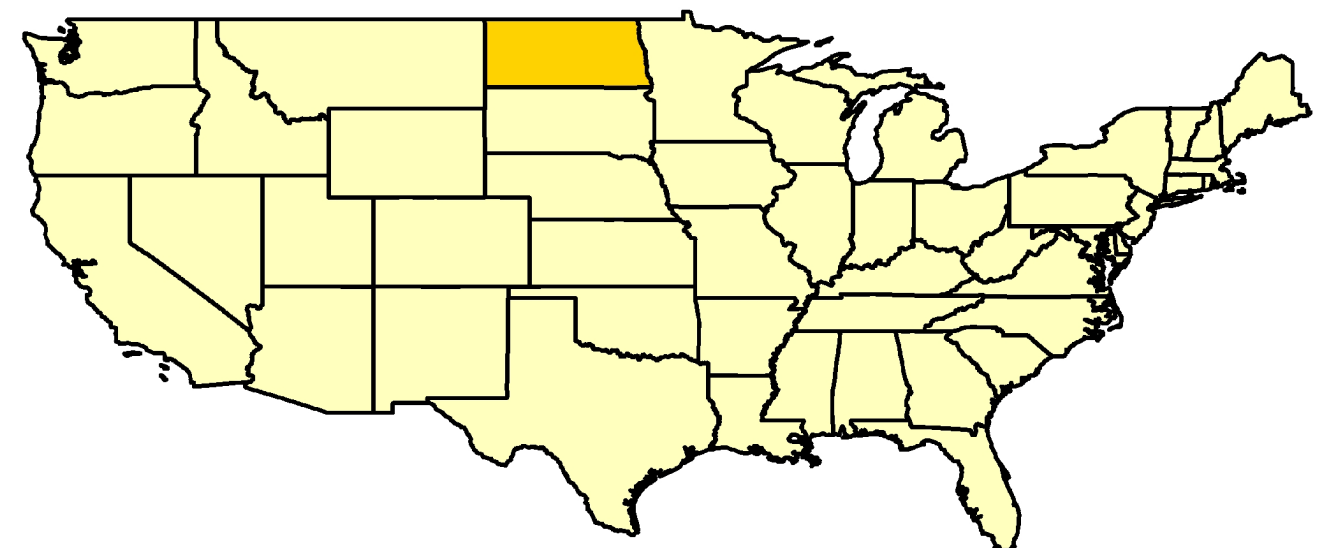
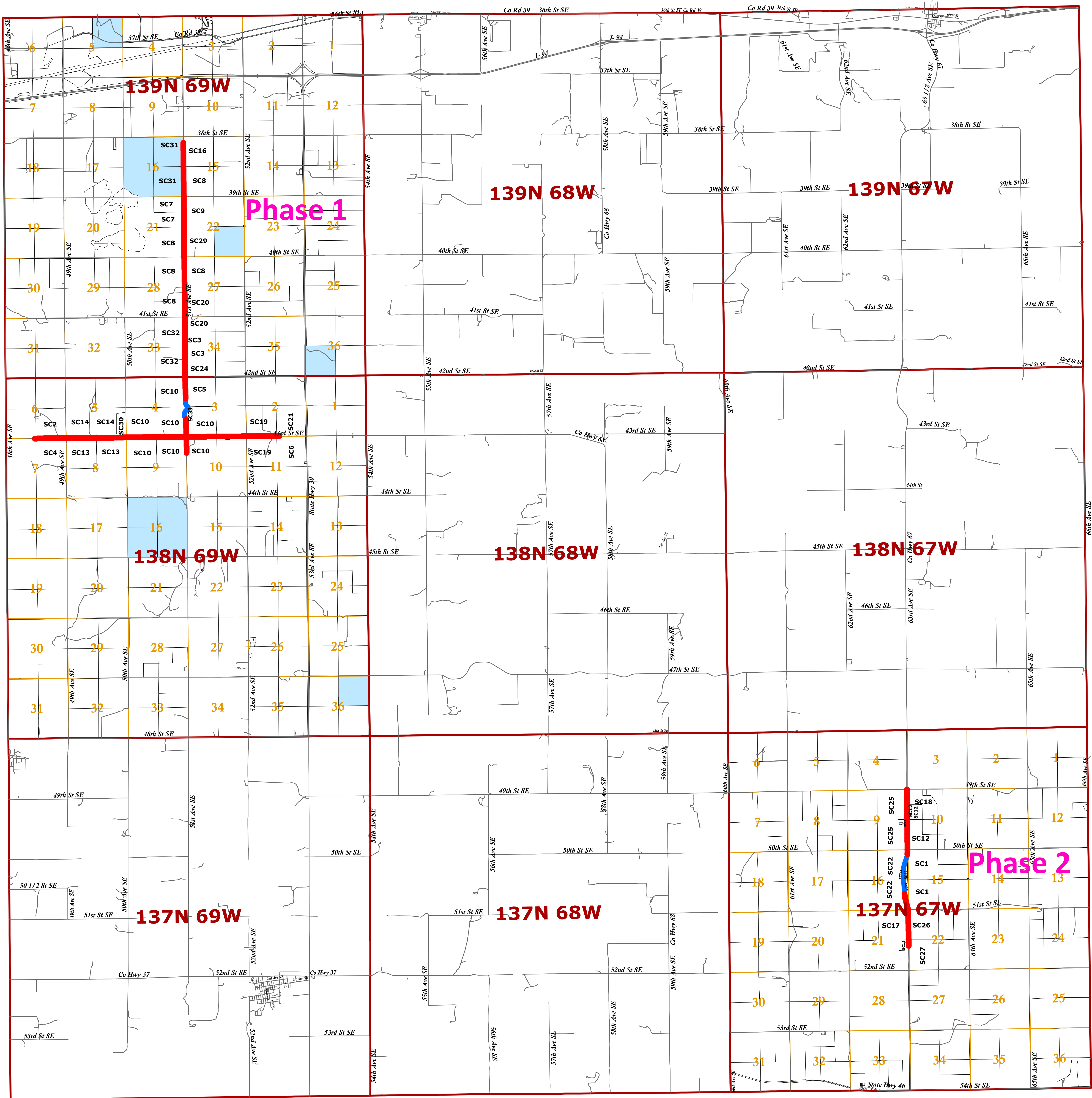
Should you have any questions, please contact our office.

Sincerely,

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

Todd L. Holweger  
Permit Manager/Geophysical Supervisor





# DSA 2D Stutsman Surface Map

February 27, 2023

- Legend
- Source & Receiver Line
  - Receiver Only
  - Rail
  - Outline
  - Townships
  - Sections
  - State Lands
  - BLM



State Plane  
North Dakota South  
NAD 27  
Scale 1:36,000

Area Of Interest

Phase 1: 9.855 Linear Miles  
Phase 2: 2.624 Linear Miles  
Stutsman 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.





**AFFIDAVIT OF NOTICE**

**BEFORE ME, the undersigned authority, personally appeared Bruce A. Fulker of Cougar Land Services, LLC., whose office address is located at 19901 SW Freeway, Suite 102, Sugar Land, TX. 77479 who being duly sworn, upon oath stated and affirmed that as an authorized agent for Paragon Geophysical Services, Inc. all operators of the land and each landowner within one-half mile of the land on which the geophysical exploration activities are to be conducted on the DSA 2D Stutsman Phase I Project in the extended area have been provided with a copy of Section 38.08.1 (Exploration Permit) and NDCC Chapter 38.11.1, (Oil and Gas Production Damage Compensation), per the requirement of the Geophysical Exploration Permit.**

Executed this 27<sup>TH</sup> day of February 2023.

B. A. Fulker

**Bruce A. Fulker**

STATE OF ARKANSAS )  
 ) ss  
COUNTY OF WASHINGTON)

**The foregoing instrument was acknowledged signed and subscribed before me this 27th day of February 2023, by Bruce A. Fulker, who represented that he was duly authorized to execute the foregoing instrument for the uses and purposes set forth therein.**

**WITNESS my hand and official seal.**

**Doug Garrett  
Notary Public  
Hot Spring County, Arkansas  
Commission #12708656  
Expires September 18, 2029**

Name: Doug Garrett  
Notary Public  
State of Arkansas  
My commission expires: SEPT 18, 2029



**AFFIDAVIT OF ROAD USE APPROVAL**

BEFORE ME, the undersigned authority, personally appeared Bruce A. Fulker of Cougar Land Services, LLC., whose office address is located at 19901 SW Freeway, Suite 102, Sugar Land, TX. 77479 who being duly sworn, upon oath stated and affirmed that as an authorized agent for Paragon Geophysical Services, Inc. that Paragon Geophysical Services, Inc. has written approval to conduct seismic operations on St. Paul Township roads related to the DSA Stutsman Phase 1 Project. Paragon has verbal approval from Newberry Township supervisors for use of roads related to DSA 2D Stutsman Phase 1.

Executed this 9<sup>TH</sup> day of March 2023.

B. A. Fulker

Bruce A. Fulker

STATE OF ARKANSAS )  
 ) ss  
COUNTY OF WASHINGTON)

The foregoing instrument was acknowledged signed and subscribed before me this 9th day of March 2023, by Bruce A. Fulker, who represented that he was duly authorized to execute the foregoing instrument for the uses and purposes set forth therein.

WITNESS my hand and official seal.

Michelle Garrett  
Notary Public  
Hot Spring County, Arkansas  
Commission No. 12709460  
COMM. EXP. 12/26/2029

Michelle Garrett  
Name: Michelle Garrett  
Notary Public  
State of Arkansas  
My commission expires: 12-26-2029

PROSPECT: DSA 2D  
JOB# 1838ND

PARAGON GEOPHYSICAL Serv. Inc.  
3500 N. ROCK ROAD  
BLDG. 800 STE B  
WICHITA KS 67226

St. Paul Township

Paragon Geophysical to conduct a 2-dimensional geophysical survey in Stutsman County North Dakota between March 7th and March 31, 2023.

The plan is to conduct operations within road right of ways.

Survey personnel will be working along the roadway to complete the following tasks:

- Locate infrastructure such as underground pipelines and water wells.
- Mark source and receiver points with a paint mark and a stake or a flag
- Deploy and retrieval of equipment, including sensors, battery packs, and Wi-Fi transmitters.
- Acquire of a 3-D geophysical survey using buggy mounted vibroseis units.

Approved on 3/6/2023 @ Special Township meeting @ Medina City Hall @ 5:00 pm.

*Vina Schumler - Clerk/Treasurer*  
*Tom Kleven Chairman Supervisor*  
*Dwight Dichter*  
*Chp Belmont*

PARAGON GEOPHYSICAL Serv. Inc.

*Art Luna*  
ART LUNA  
Field PERMIT Agent  
3/6/2023





NODE - LAID OUT ALONG ROAD EVERY 82.5'

## AHV-IV™ (PLS-362)

### FEATURES

- Up to 61,800 lbs of peak force and frequency limit of 1 Hz to 250 Hz\*
- Fully integrated with INOVA's Vib Pro™ source controller for greater control, timing, and QC
- Durable, rectangular baseplate reinforced to support long term field use in comparison with I-Beam structured baseplates
- INOVA's Patented Pre-Loaded Stilt Structure prolongs the life of parts
- Certified Roll-Over Protection
- Articulated, Oscillated Steering
- High Capacity Hydraulic Cooling



### TECHNICAL SPECIFICATIONS - PLS-362 ACTUATOR

Shaker Model:	P-Wave Vibrator; PLS-362	Pilot Valve:	MOOG
Peak Force:	275 kN (61,800 lb)	Filtration:	3-micron absolute servo filter; 3.5-micron absolute, high and low pressure, triple element
Piston Area:	132.9 sq cm (20.6 sq in)	Accumulators:	2 x 19 L (5 gal); bladder-type
Mass Weight:	3,683 kg (8,120 lb)	Heat Exchanger:	Steel core; multi-wing fan; hydraulically-driven
Driven Weight:	1,823 kg (4,020 lb)	Reservoir:	170 L (45 gal)
Useable Stroke:	9.83 cm (3.87 in)	Baseplate Type:	Reinforced rectangular
Frequency Limit:	1 Hz to 250 Hz*	Baseplate Area:	2.5 m <sup>2</sup> (3,864 in <sup>2</sup> )
Mass Accumulators (2):	1 L (0.26 gal.); in-line	Baseplate Clearance:	46 cm (18 in) - Tires 63.5 cm (25 in) - Tracks
Lift Stroke:	97 cm (38 in)	Winch Capacity:	13,608 kg (30,000 lb)
Balance Method:	Airbags		
Isolation Method:	Airbags		
Hydraulic System:	Closed-loop		
Hydraulic System Pumps:	2 x 119 cc (7.25 in <sup>3</sup> ); Denison P-7		
Servo Valve:	Atlas 240H (with DR modification)		



## AHV-IV™ (PLS-362)

### TECHNICAL SPECIFICATIONS - CHASSIS

Engine:	Detroit Diesel – Series 60, 14 L (425 BHP @ 1,900 RPM)
Optional Engine:	500 BHP @ 1,900 RPM
Air Cleaner:	Dry-type, 3-stage with pre-cleaner
Cooling:	Water-cooled radiator to +50 °C (+122 °F) for hot climate and -50 °C (-58 °F) for cold climate
Air Compressor:	13 CFM
System Warning Device:	Engine shutdown system for low oil pressure, high engine water temperature, and low coolant level
Fuel Capacity:	757.08 L (200 gal)
Drive Pumps:	100 cc (6.1 in <sup>3</sup> ) with electric displacement control
Drive Motors:	250 cc (15.25 in <sup>3</sup> ) variable volume with electronic control for 6 forward and 2 reverse speeds
Frame:	Solid-steel frame for maximum strength and reliability; 35 articulated; hydraulic power steering; 16.5 oscillation center joint
Axles:	Inboard planetary axle with enclosed wet disc brakes and differential lock
Gearboxes:	Single speed
Cab:	Fabricated-steel construction; high visibility with adjustable driver and passenger seat; two, 3-point shoulder belts; air-conditioning; heater; defroster; wiper; dome light; and side mounted mirrors
Electrical:	+24 V start; +12 V run with 110-amp alternator and two, heavy-duty, +12 V, 8D batteries; battery-disconnect switch

### PHYSICAL SPECIFICATIONS

Buggy Length:	10.01 m (400 in)
Buggy Width:	3.4 m (134 in) for 66 x 44 in tires 2.44 m (96 in) for 23.5 x 25 tires 3.0 m (118 in) for tracks
Height (maximum):	3.50 m (138 in) for tires 3.68 m (145 in) for tracks
Wheelbase:	4.77 m (188 in)
Turning radius – inside:	6.93 m (273 in)
Speed:	26 km/hr (16 mph) tires 20.9 km/hr (13 mph) tracks
Gradeability:	Tires: 60%; (31 degrees) Tracks: 51%; (27 degrees)
Gross Vehicle Weight	Minimum 25,968 kg (57,250 lb) tires Maximum** 29,937 kg (66,000 lb) Maximum 38,600 kg (85,000 lb) tracks
Hold-down Weight:	Minimum 22,383 kg (50,350 lb) Maximum** 29,030 kg (64,000 lb)
Front axle Weight:	Minimum 13,789 kg (30,400 lb) tires Maximum** 15,853 kg (34,950 lb) Maximum 18,600 kg (41,000 lb) tracks
Rear axle Weight:	Minimum 12,179 kg (26,850 lb) Maximum** 14,084 kg (31,050 lb) Maximum 20,000 kg (44,000 lb) tracks

\* Max peak force from 6.2 Hz

\*\* Desired weight achieved with removable slide-on frame weight





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

## FORM GE 1

### FILING AUTHORIZATION

COMPANY NAME: Paragon Geophysical Services, Inc.

ADDRESS: 3500 N Rock Rd. Bldg. 800 Suite B

CITY: Wichita STATE: KS ZIP: 67266

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: Aaron Bateman Date: 01/19/2023

Printed Name: Aaron Bateman Title: President

Phone: 316-636-552 Email Address: abateman@paragongeo.com

\*\*\*\*\*

Witness Signature: Erick Erwin Date: 1-19-23

Witness Printed Name: Erick Erwin