

# Coteau 2-D CT-1 & CT-3

Date: 7/24/2024

<ul> <li>OPUS</li> <li>20211015_Well_Locations_NAD27_N</li> </ul>	<ul> <li>Locked</li> <li>ID_S</li> <li>Unlocked</li> </ul>	HSE_Hazard_Points A_Access_Rte_Trails	<pre>     C_Water_Sewer_Line     C_Pipelines </pre>	es SurfaceNoPermits SurfaceTracts	Buffer_No_
Project Boundary		tures — A_Paved_Roads	C_Utility_Lines	Townships	
Project Boundary	<ul> <li>C_Buffered_Struct</li> <li>* C_Markers</li> </ul>	ures — A_Paved_Roads	••••• C_Utility_Lines	Townships       AVS_GPSP_Property	





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

Permit No.					
#97-0332					
Shot Hole Operations	*Non-Explosive Operations				
	Vibroseis				
SECTION 1					
Geophysical Contractor					
Echo Seismic USA					
Project Name and Number	County(s)				
Coteau 2D Survey PPV Test	Mercer County				

Township(s)	Range(s)
145 North	87and 88 West
Drilling and Plugging Contractors	
N/A	
Date Commenced	Date Completed
September 24, 2024	September 26, 2024

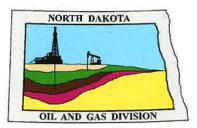
#### **SECTION 2**

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.

٢	GEOPHYSICAL EXPLORATION A INDUSTRIAL COMMISSION OF NORTH DAKOTA OIL AND GAS DIVISION 600 EAST BOULEVARD DEPT 405 BISMARCK, ND 58505-0840 SFN 51456 (03-2011)		COMPLETION REPORT - FORM GE 6B			
	PERMIT NAME (R	equired):	COTEAU 2D Survey PPV Test			
	PERMIT N	IUMBER:	<b>K97-0332</b>			
AFFIDAVIT OF COMPLETION (GEOPHYSICAL CONTRACTOR)						
STATE OF	Arkansas )					
	)					
COUNTY O	F Washington )					
Before me,	Michelle Garret	tt	, a Notary Public in and for the said			
County and	State, this day personally appeared		Bruce Fulker			
who being fi	rst duly sworn, deposes and says that	t (s)he is employe	d by Authorized Agent for			
	Echo Seismic USA		, that (s)he has read North Dakota			
Century Co	de Section 38-08.1, that the forego	oing seismic proj	ect 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.					
			Bu - 991			
		Geophysical Co	ontractor Representative			
Subscribed I	n my presence and sworn before me	this <u>16</u> H	day of <u>March</u> , 2025.			
	Michelle Garrett Notary Public Hot Spring County, Arkansas Commission No. 12709460 COMM. EXP. 12/26/2029	Notary Public	MichelleBarrett			
My Commiss	ion Expires <u>12-210-20</u>	29				



## **Oil and Gas Division**

Mark F. Bohrer - Assistant Director North Dakota Industrial Commission Department of Mineral Resources www.dmr.nd.gov/oilgas/

August 22, 2024

Echo Seismic USA, Inc. Richard Habiak President 4500 8A Street NE Calgary, AB T2E 4J7 Canada

RE: COTEAU 2-D PPV TEST LINES CT1, CT3 GEOPHYSICAL EXPLORATION PERMIT #97-0332 MERCER COUNTY NON-EXPLOSIVE METHODS

Dear Mr. Habiak:

Be advised that your Geophysical Exploration permit is conditionally approved; effective for one year from August 22, 2024.

#### **PERMIT STIPULATIONS:**

- Echo Seismic USA, Inc. must contact seismic inspector Tom Torstenson at (701) 290-1546 72 hours prior, to arrange a start-up meeting. Also, a copy of the entire permit is required for all contractors at the start up meeting.
- Echo Seismic USA, Inc. must contact Tom Torstenson at (701) 290-1546 24 hours prior to conducting any geophysical activities.
- 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. 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.
- 2. 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: <u>ttorstenson@nd.gov</u> with all source and receiver points,
- 3. 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.
- Information regarding the location of water wells, springs, etc.; refer to the following ND State Water Commission Mapservice website, at: <u>http://mapservice.swc.state.nd.us/</u>
- 5. The entire permit can be viewed, as well as the status of various seismic projects in the state, at: <u>https://www.dmr.nd.gov/oilgas/seismic/seismic/seismicstats.asp</u>

Should you have any questions regarding this matter, feel free to contact our office.

Sincerely,

Todd L. Holweger Permit Manager/Geophysical Supervisor

Received



#### 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)

AUG 2 1 2024

1			1				ND Oil & Gas		
1) a. Company Echo Seismic USA			Address	troot Unit D 42	Division				
Contact				4833 Front Street, Unit B 435, Castle Ro					
Milt Tetzlaff			Telephone 403.216.5919			Fax 403.216.0989			
Surety Company Bank of North Dak	ota		Bond Amount		¢50 000 00	Bond Number	200		
2) a. Subcontractor(s)	Ola		Address		\$50,000.00	GEO Telephone	307		
b. Subcontractor(s)			Address			Telephone			
3) Party Manager TBD			Address (local)			Telephone (local)			
4) Project Name or Line Numbers Coteau 2D PPV Test Lines CT1 - CT3							7		
5) Exploration Method (S			D, 3D, Other)				/		
Vibroseis (PPV Tes				ot source inter	vals - No Re	ceivers Deploy	ved.		
6) Distance Restrictions	(Must check	k all that apply)							
300 feet - NonExpl	osive - Dist	ance setbacks	apply to water wells	s, buildings, underg	round cisterns,	pipelines, and flowir	ng springs.		
660 feet - Shot Hol	le - Distanc	e setbacks app	ly to water wells, bu	uildings, undergrou	nd cisterns, pipe	lines, and flowing s	prings.		
7) Size of Hole	Amt of	Charge	Depth	Source points	per sa, mi,	No. of sq. mi.			
3-D					, per eq	inter er eq. mil			
Size of Hole	Amt of	Charge	Depth	Source points	s per In. mi.	No. of In. mi.			
2-D				105		3.79			
<ol> <li>Approximate Start Dat August 20,2024</li> </ol>	e				nate Completion Date n <b>ber 1, 2024</b>				
THE COMMISSION	MUST BE	E NOTIFIED A	T LEAST 24 HOU	RS IN ADVANCE	OF COMMEN	CEMENT OF GEO	PHYSICAL OPERATIONS		
9) Location of Proposed I	Project - Co	ounty							
Mercer County "Se	e attach	ed Exhibit A							
		Section	6	, 7	T. 145	F	<sup>.</sup> 87		
		Section	11 12 13	14,23,24	т. (4 s	-	<sup>7</sup> 88		
Section(s),		Section			T.	F	٦.		
Township(s) & Range(s)		Section			Т.	F	२.		
<i>a.</i>		Section			Т.		२.		
		Section			Т.	F	٦.		
I hereby swear or affirm t	hat the info	rmation provide	d is true, complete	and correct as det	ermined from al	l available records.	Date August 1.2024		
Signature		A	Printed Name		Tit	le			
Ы.	Ja	GAR	Bruce Fulker		A	gent for Echo S	eismic USA		
Email Address(es)									
bfulker@cougarlandservi	ces.net								
						Permit Co	nditions		
	(This sp	ace for State o	ffice use)		* Dorm	it in hand coquirod a	t pre-program meeting		
Permit No. 97-0	0332		Approval Date 8/22/	12024	with fi		aware of all NDIC Rules		
Approved by	on.	Lob/w.	egen		<ul> <li>See attached letter.</li> </ul>				
Title Mineral Resources Permit Manager									

\*See Instructions On Reverse Side

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Exhibit "A"

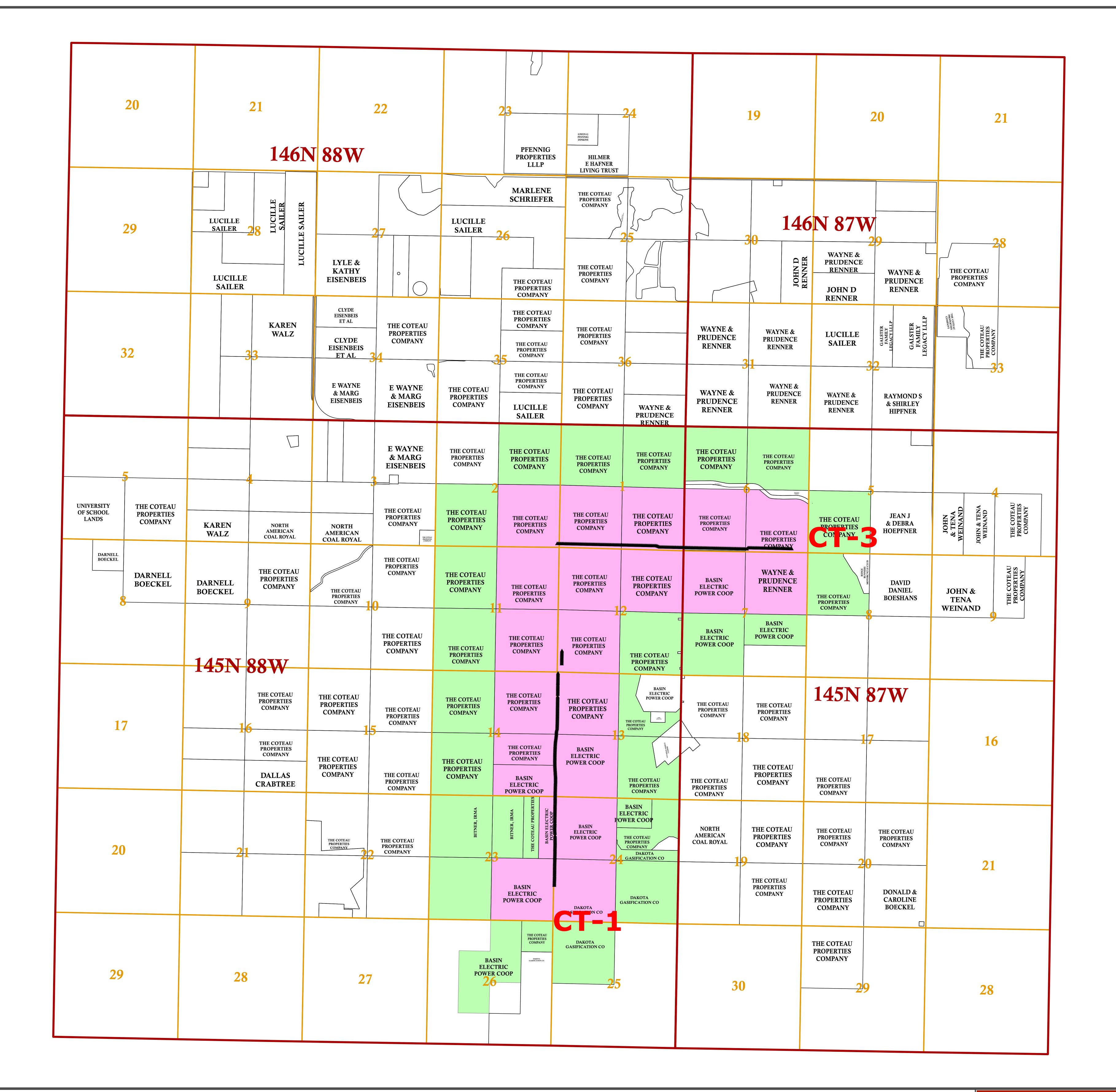
Geophysical Exploration Permit Form GE 1

Coteau 2D Peak Particle Velocity (PPV) Test

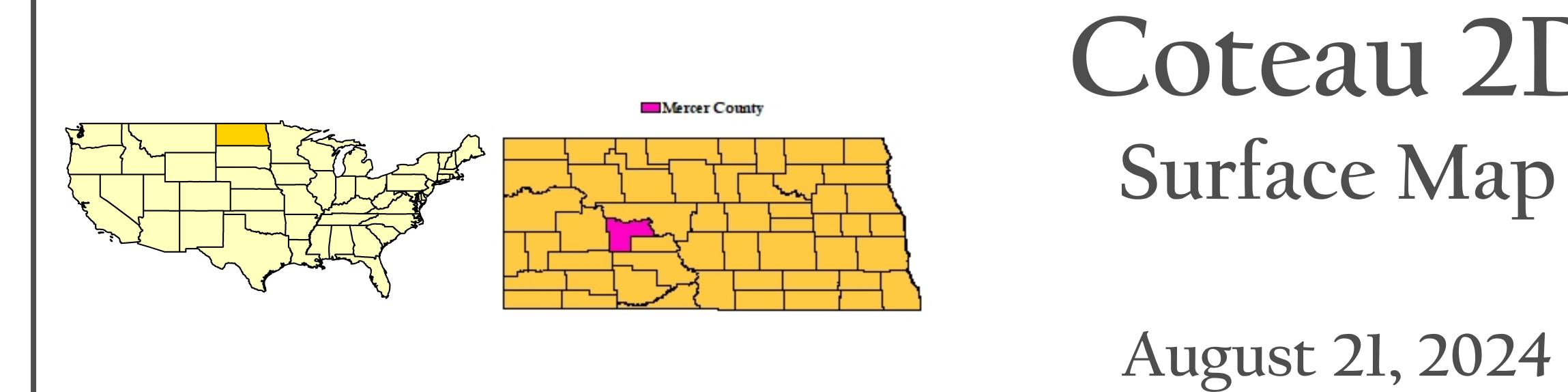
Echo Seismic USA

Township 145 N Range 87 West: Sections 6.7

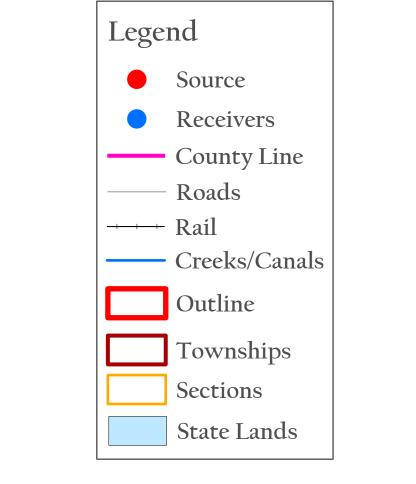
Township 145 N Range 88 West: Sections: 1.2.11.12.13.14.23.24











COUGAR State Plane North Dakota South NAD 27 Scale 1:15,000 Area Of Interest 24.08 Linear Miles Mercer 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



## **Oil and Gas Division**

Mark F. Bohrer - Assistant Director North Dakota Industrial Commission Department of Mineral Resources www.dmr.nd.gov/oilgas/

August 22, 2024

The Honorable Carmen Reed Mercer County Auditor P.O. Box 39 Stanton, ND 58571-0039

#### RE: Geophysical Exploration Permit Number 97-0332

Dear Ms. Reed:

Pursuant to Section 38-08.1-04.2 of the North Dakota Century Code, please be advised that the Echo Seismic USA, Inc. was issued the above captioned permit on August 22, 2024, and will remain in effect for a period of one year. The entire permit can be viewed on our website at: <a href="https://www.dmr.nd.gov/oilgas/seismic/seismicstats.asp">https://www.dmr.nd.gov/oilgas/seismic/seismicstats.asp</a>

Should you have any questions, please contact our office.

Sincerely, Todd L. How ber

Permit Manager/Geophysical Supervisor

From:	Bruce Fulker	
То:	Holweger, Todd L.	
Subject:	RE: Coteau 2D PPV Test	
Date:	Wednesday, August 21, 2024 2:22:56 PM	
Attachments:	Coteau 2D Surface Map PPV Test Map.pdf	

**\*\*\*\*\* CAUTION:** This email originated from an outside source. Do not click links or open attachments unless you know they are safe. **\*\*\*\*** 

Todd: As discussed I have updated the map removing CT2 and CT4.

The purpose of the PPV (Peak Particle Velocity) Test is to establish the ground movement in inches per second to understand safe offset distances for vibroseis source. In this case we have a lot of infrastructure that is eliminating a lot of area for sources so by establishing the ground movement we can provide this to the mine engineers and work on variances in offsets to close some of these gaps down to insure we get the best quality data while operating is a safe manner so as not to cause damage to pipelines etc.

Ground vibration is measured in terms of Peak Particle Velocity (PPV) with units in mm/s or mm/s-1. It should be noted that the PPV refers to **the movement within the ground of molecular particles and not surface movement**. The highest amplitude of ground motion among three mutually orthogonal components, measured by a triaxial <u>geophone</u> and is reported in inches per second (in/s).

Hopefully this helps.

Regards,

#### Bruce Fulker

President

Cougar Land Services, LLC 19901 Southwest Freeway | Suite 102 | Sugar Land, TX 77479 Office.: (281) 242-2244 | Cell: (713) 806-2024

Mailing Address Cougar Land Services, LLC. PO Box 17147 Sugar Land, TX 77496-7147

Email: <u>bfulker@cougarlandservices.net</u> Web: www.cougarlandservices.net

# COUCAR

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From: Bruce Fulker

Sent: Sunday, August 4, 2024 2:19 PM

To: Holweger, Todd L. <tholweger@nd.gov>

Subject: Coteau 2D PPV Test

Todd: Attached is the completed Form GE1 for the Coteau 2D PPV Test in Mercer County. The thick black lines along line CT1 and CT3 are the locations where the PPV test will take place. There will be 200 proposed vibe

locations on each line at 50 foot spacing. Obviously they will only shake outside buffer's etc. The line on CT1 will probably be offset some to the west to get away from the pipeline but that's to be determined when survey crews get there.

**There are no receivers on this test.** Technicians with PPV monitors will setup at random locations along these lines to record ground movement at distances from 50' to 500' away from the vibes.

This test should only take 2-3 days to complete. The test is to establish safe offset distances in advance of coming back in October and reshooting the Coteau 2D again.

If you have any questions feel free to contact me anytime. Regards,

#### Bruce Fulker

President

Cougar Land Services, LLC 19901 Southwest Freeway | Suite 102 | Sugar Land, TX 77479 Office.: (281) 242-2244 | Cell: (713) 806-2024

Mailing Address Cougar Land Services, LLC. PO Box 17147 Sugar Land, TX 77496-7147

Email: <u>bfulker@cougarlandservices.net</u> Web: www.cougarlandservices.net



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#### **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 Echo Seismic USA, 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 Coteau 2D Peak Particle Velocity (PPV) test 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 29<sup>th</sup> day of July 2024.

**Bruce A. Fulker** 

STATE OF ARKANSAS)) ss) ssCOUNTY OF WASINGTON)

The foregoing instrument was acknowledged signed and subscribed before me this 29<sup>TH</sup> day of July 2024, 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

Name: Michelle

Notary Public State of Arkansas My commission expires: 12-24-2029



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

#### FORM GE 1

#### FILING AUTHORIZATION

COMPANY NAME: Echo Seismic USA				
ADDRESS: 4833 Front Street, Unit B 435,				
CITY: Castle Rock	STATE:	СО	ZIP: 80104	

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

Authorized Individuals	Phone Number	E-Mail Address	
Bruce Fulker	713.806.2024	bfulker@cougarlands	ervices.net
		Σ.	
Company Authorized Signature:	¢.	Date:11/	/08/2021
Printed Name: Dan McArthur		Title: Corp. VP	
Phone: 403 540-1711 **********************************	Email Addre	ess:mcarthurd@echo- ************************************	*****
Witness Printed Name:Keith V	Vakelam		