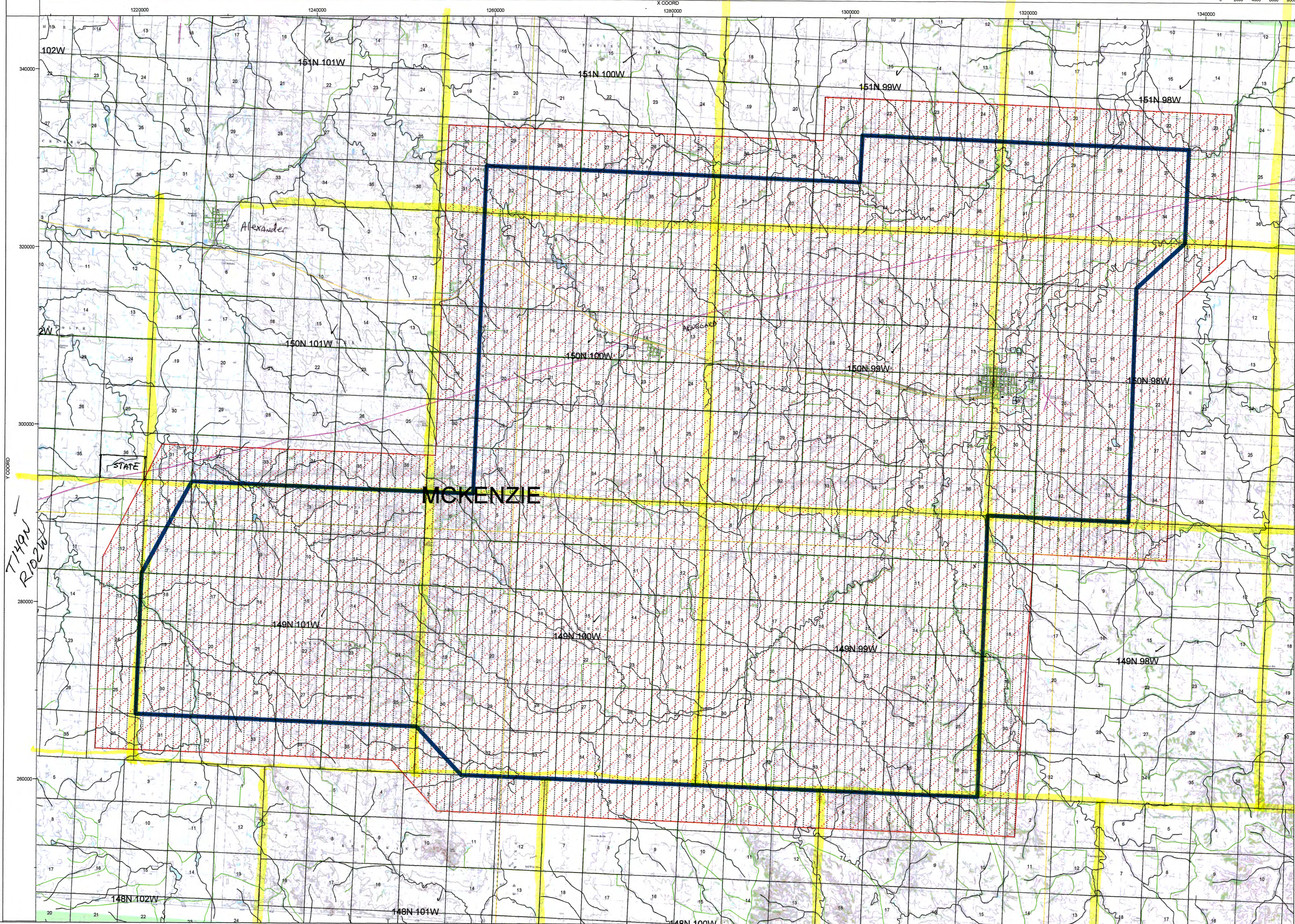


Buffalo Wallow 3D A3b
HESS CORPORATION
BUFFALO WALLOW 3D: Design A3b
RL: 880', RI: 220'
SL: 1760', St: 220'
Patch: 24x120
McKenzie County, North Dakota
March 15, 2011

SOURCE AND DETECTOR MAP: DESIGN A3b

4700.00 Feet per Inch
0 2000 4000 6000 8000



T149N R102W

Receivers in N/S Direction
Vibe Points Diagonal NE/SW

T148N R99W

Data Sources
Buffalo Wallow 3D vln topo 3D
Buffalo Wallow 3D 2d
Mesa Professional
© 2011
Date: 03-15-11
Time: 12:55
DAWSON
Dawson Geophysical Company



Buffalo Wallow J-1
970204



Oil and Gas Division

Lynn D. Helms - Director Bruce E. Hicks - Assistant Director

Department of Mineral Resources

Lynn D. Helms - Director

North Dakota Industrial Commission

www.oilgas.nd.gov

APRIL 20, 2011

The Honorable Frances Olson
McKenzie County Auditor
P.O. Box 543
Watford City, ND 58854-0543

RE: Geophysical Exploration Permit #97-0204

Dear Frances Olson:

Pursuant to Section 38-08.1-04.2 of the North Dakota Century Code, please be advised that DAWSON GEOPHYSICAL COMPANY was issued the above captioned permit on APRIL 20, 2011 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,

Todd L. Holweger
DMR Permit Manager



Oil and Gas Division

Lynn D. Helms - Director Bruce E. Hicks - Assistant Director

Department of Mineral Resources

Lynn D. Helms - Director

North Dakota Industrial Commission

www.oilgas.nd.gov

APRIL 20, 2011

Mr. Zane Zirschky
Dawson Geophysical Company
508 WEST WALL STREET
STE 800
MIDLAND, TX 79710

RE: BUFFALO WALLOW 3-D
GEOPHYSICAL EXPLORATION PERMIT # 97-0204
MCKENZIE COUNTY
NON EXPLOSIVE METHOD

Dear Mr. Zirschky:

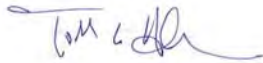
Please be advised that we are in receipt of your Geophysical Exploration permit application and it is conditionally approved; effective for one year from APRIL 20, 2011. **PURSUANT TO NDAC 43-02-12-05 (DISTANCE RESTRICTION) non-explosive exploration methods may not be conducted not less than 300 feet from a water well, building, underground cistern, pipelines, or flowing springs.** Review the following conditions for your permit:

1. A pre-program meeting with state seismic inspector Tom Torstenson may be 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. SD card or email: ttorstenson@nd.gov with all source and receiver points,
 - e. Letter stating that the Geophysical Company has given all surface owner's a copy of the Section and Chapter of the NDCC as stated in paragraph 5.
4. The following information must be submitted within 30 days of the completion of the project by the SUBCONTRACTOR(s) (when applicable):
 - a. Plugging Report
 - b. Plugging Affidavit

5. It is required that within seven days of initial contact between the permitting agent and the operator of the land, the permitting agent shall provide the operator of the land and each landowner owning land within one-half mile of the land on which geophysical exploration activities are to be conducted a written copy of NDCC Section 38-08.1-04.1 (Exploration Permit) and NDCC Chapter 38-11.1 (Oil and Gas Production Damage Compensation). The permitting agent shall file an affidavit with this office confirming compliance with such notification. For your convenience, a copy of both Sections are enclosed.
6. 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.
7. 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/>
8. 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
DMR 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)



1) a. Company DAWSON GEOPHYSICAL CO.		Address 508 W. Wall St., Ste 800, Midland, TX 79710			
Contact ZANE ZIRSCHKY		Telephone 432-681-3000		Fax 432-684-3030	
Surety Company U.S. Specialty Ins. Co.		Bond Amount \$ 50,000⁰⁰		Bond Number B005272	
2) a. Subcontractor(s)		Address		Telephone	
b. Subcontractor(s)		Address		Telephone	
3) Party Manager ZANE ZIRSCHKY		Address (local) 6855 S. Havana Ste 500		Telephone (local) 303-723-0440	
4) Project Name or Line Numbers Buffalo Wallow 3D # 13511 Centennial, CO					
5) Exploration Method (Shot Hole, Non-Explosive, 2D, 3D, Other) 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 NA	Amt of Charge NA	Depth NA	Source points per sq. mi. 75 APP.	No. of sq. mi. 250 APP.	
Size of Hole 2-D NA	Amt of Charge NA	Depth NA	Source points per ln. mi. NA	No. of ln. mi. N/A	
8) Approximate Start Date 4-22-11			Approximate Completion Date October 15, 2011		

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

9) Location of Proposed Project - County McKenzie County			
Please see Attached Sheets. 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 4-18-11
Signature 	Printed Name DALE SCHMID	Title Permit Agent	
Email Address(es) permit.schmid@gmail.com			

(This space for State office use)		<p align="center">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. 970204	Approval Date 4/20/11	
Approved by 	Title General Resources Permit Manager	

GEOPHYSICAL EXPLORATION PERMIT - FORM GE 1
SFN 51459

1. The original and one copy of a complete application must be submitted to the Oil and Gas Division. Be sure the form is complete.
2. This form must be accompanied by the \$100 permit fee and a pre-plot map displaying the proposed location of the seismic program lines. *Please See enclosed check*
3. Operations shall not commence until the Geophysical Exploration Permit - Form GE 1 has been approved.
4. Be sure that you have read and thoroughly understand the geophysical exploration rules and regulations, Chapter 38-08.1 North Dakota Century Code and Chapter 43-02-12 North Dakota Administrative Code. *Printed & Read*
5. An application for a geophysical exploration permit must be submitted to the Commission at least three business days before commencing operations.
6. Must supply latitudes and longitudes of post-plot source and receiving points electronically.

Any questions or comments should be directed to:

GEOPHYSICAL REGULATION SUPERVISOR
INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
600 EAST BOULEVARD AVE, DEPT 405
BISMARCK, NORTH DAKOTA 58505-0840

TELEPHONE 701-328-8020
FAX 701-328-8022

McKenzie Co. Buffalo Wallow 3D

Dawson Geophysical

T151N Sec's 19, 20, 21, 22, 23, 26, 27, 28, 29,
R98W 30, 31, 32, 33, 34, 35.

T150N Sec's 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17
R98W 18, 19, 20, 21, 22, 27, 28, 29, 30, 31, 32
33 + 34

T149N Sec's 3, 4, 5, 6, 7, 18, 19, 30, 31
R98W

T151N Sec's 21, 22, 23, 24, 25, 26, 27, 28
R99W 29, 30, 31, 32, 33, 34, 35 + 36

T150N ALL 36 Sections
R99W

T149N
R99W ALL 36 Sections

T148N Secs Sec 2, ALL of Sec's 3, 4
R99W 5 + 6

MCKENZIE Co. Buffalo Wallow 3D
 Dawson Geophysical

T148N
 R100W

Sec's 1, 2, 3, 4, 5 + 6

T148N
 R101W

Sec's 1, 2 +

Sec 3

T149N
 R100W

ALL 36 Sections

T150N
 R100W

ALL 36 Sections

T151N
 R100W

Sec's 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35 + 36

T149N
 R101W

ALL 36 Sections

T150N
 R101W

Sections 31, 32, 33, 34, 35 + 36

T149N
 R102W

Sections

Sec 1, Sections 12, 13, 24

Sections 25 + 36

Prepared by DALE Schmid

