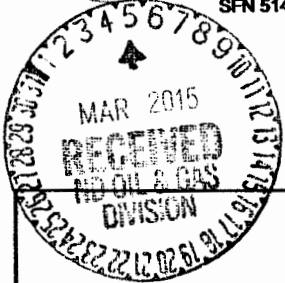




**GEOPHYSICAL EXPLORATION AFFIDAVIT OF COMPLETION REPORT - FORM GE 6B**  
 INDUSTRIAL COMMISSION OF NORTH DAKOTA  
 OIL AND GAS DIVISION  
 600 EAST BOULEVARD DEPT 405  
 BISMARCK, ND 58505-0840  
 SFN 51456 (03-2011)



PERMIT NAME (Required): Global Geophysical Services Inc  
 PERMIT NUMBER: 97-0260

**AFFIDAVIT OF COMPLETION (GEOPHYSICAL CONTRACTOR)**

STATE OF North Dakota )  
 )  
 COUNTY OF Bottineau )

Before me, Karen F. Larson, a Notary Public in and for the said  
 County and State, this day personally appeared Judy Hakala

who being first duly sworn, deposes and says that (s)he is employed by St Croix Seismic  
 \_\_\_\_\_, 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.

Judy Hakala  
 Geophysical Contractor Representative

Subscribed in my presence and sworn before me this 3rd day of March, 2015.

KAREN F. LARSON  
 Notary Public  
 State of North Dakota  
 My Commission Expires Oct. 12, 2016

Notary Public Karen F. Larson

My Commission Expires Oct. 12, 2016



# 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.<br>97-0260 |  |
| Shot Hole Operations  | *Non-Explosive Operations<br>Vibroseis |

## SECTION 1

|   |                                 |
|---|---------------------------------|
| Geophysical Contractor<br>Global Geophysical Services Inc 13927 South Gessner Rd, Missouri City, TX 77489 |                                 |
| Project Name and Number<br>Westhope 3D  | County(s)<br>Bottineau          |
| Township(s)<br>163N   | Range(s)<br>80W                 |
| Drilling and Plugging Contractors   |                                 |
| Date Commenced<br>February 15, 2015   | Date Completed<br>March 3, 2015 |

## SECTION 2

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

## SECTION 3

|   |
|---|
| Flowing Holes and/or Blowouts<br>S.P.#s   |
| Procedure for Plugging Flowing Holes and/or Blowouts  |
| 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).



P.O. BOX 190 ■ Gordon, WI 54838

Judy Hakala  
5410 72 Circle N  
Minneapolis, MN 55429

Cell: 612 990-7273

Email: judyinmpls@msn.com

March 5, 2015

Industrial Commission of North Dakota  
Oil & Gas Division  
Att: Todd Holweger  
600 East Boulevard Dept 405  
Bismarck, ND 58505-0840

Dear Todd,

St. Croix Seismic is currently working on behalf of LXL Consulting LTD on a 3D geophysical survey in Bottineau County, North Dakota exploring for oil and gas on behalf of Resonance Energy North Dakota.

The State of North Dakota Oil and Gas Commission requires that we provide the surface owners with ND Oil and Gas Rules and Regulations 38-08.1-04 and Chapter 38-11.1. Our permits show under conditions

8- I have been provided the ND Oil and Gas Rules and Regulations 38-08.1-04 and Chapter 38-11.1. We require the surface owner to initial the original permit.

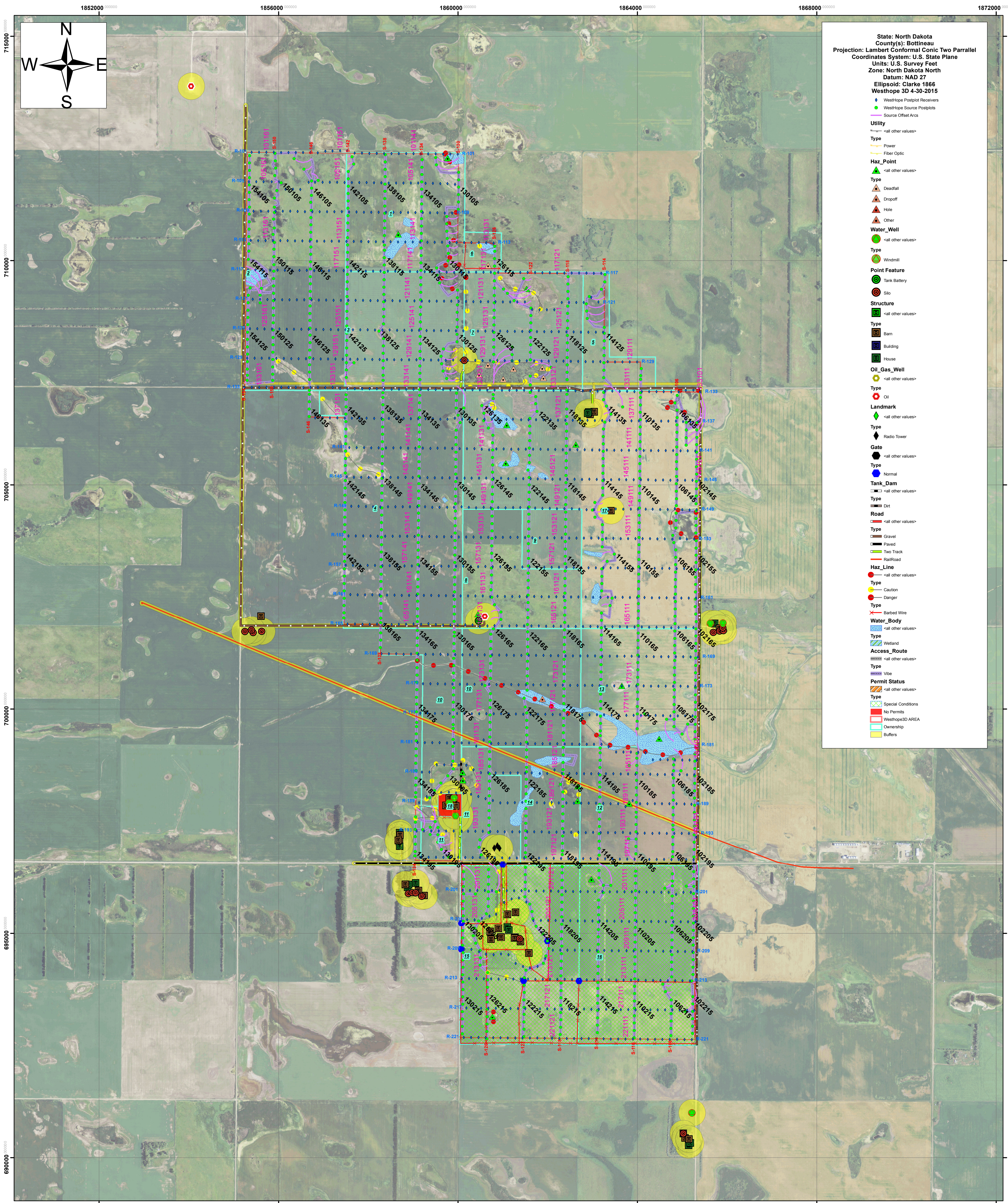
In total compliance I have done that and all my Westhope 3D permits reflect that.

Accept this letter as compliance to item #4 noted on the letter provided by you with our signed permit.

Should you have any questions or comments regarding the attached documents or scheduling, please contact me by cell phone 612 990-7273.

Regards,

Judy Hakala  
St. Croix Seismic  
Permit Agent  
612 990-7273



State: North Dakota  
County(s): Bottineau  
Projection: Lambert Conformal Conic Two Parallel  
Coordinates System: U.S. State Plane  
Units: U.S. Survey Feet  
Zone: North Dakota North  
Datum: NAD 27  
Ellipsoid: Clarke 1866  
Westhope 3D 4-30-2015

- WestHope Postplot Receivers
- WestHope Source Postplots
- Source Offset Arcs

**Utility**

- <all other values>
- Power
- Fiber Optic

**Haz\_Point**

- <all other values>
- Deadfall
- Dropoff
- Hole
- Other

**Water\_Well**

- <all other values>
- Windmill

**Point Feature**

- Tank Battery
- Silo

**Structure**

- <all other values>
- Barn
- Building
- House

**Oil\_Gas\_Well**

- <all other values>
- Oil

**Landmark**

- <all other values>
- Radio Tower

**Gate**

- <all other values>
- Normal

**Road**

- <all other values>
- Dirt
- Gravel
- Paved
- Two Track
- Railroad

**Haz\_Line**

- <all other values>
- Caution
- Danger

**Water\_Body**

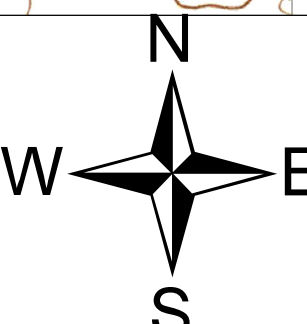
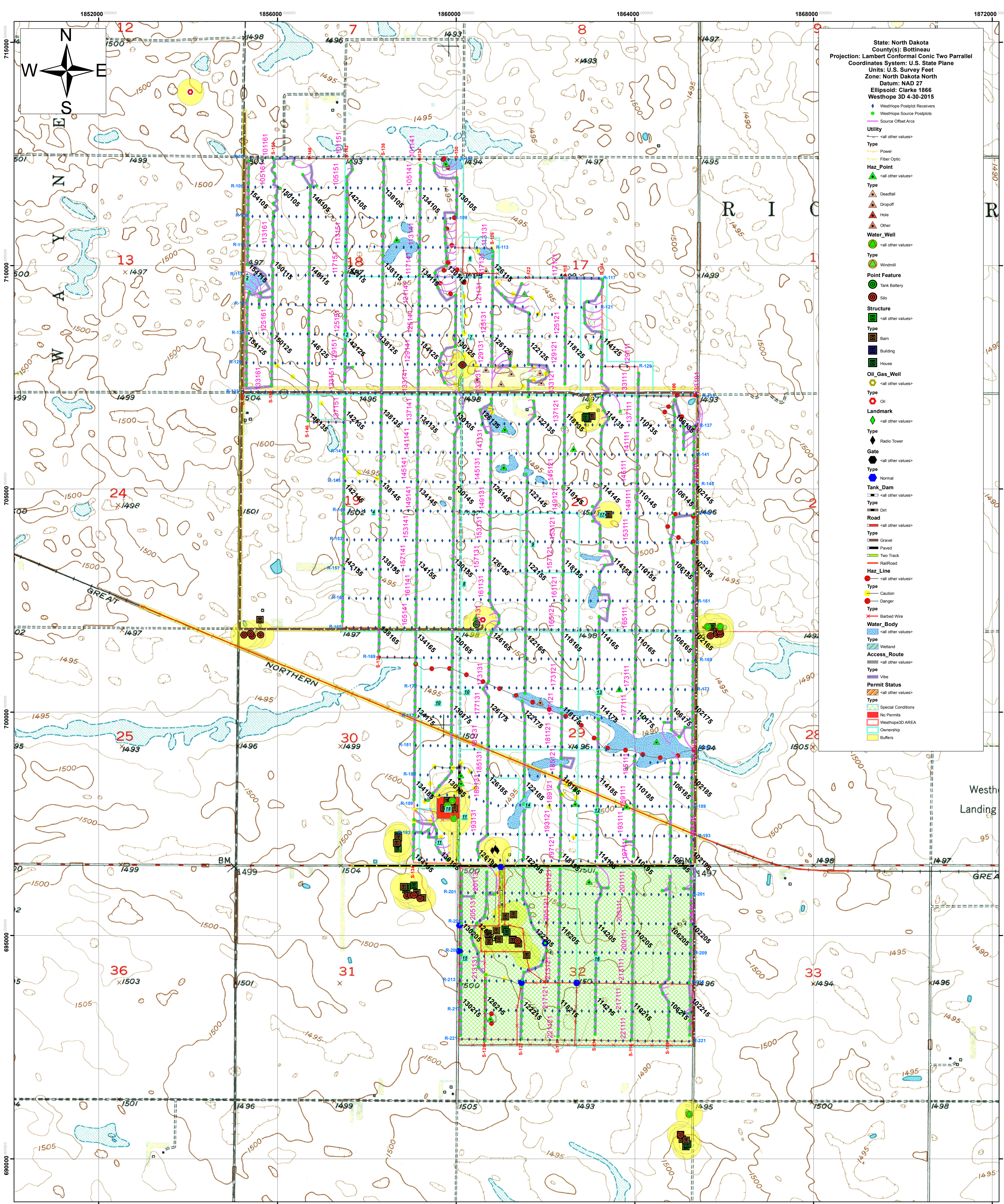
- <all other values>
- Wetland

**Access\_Route**

- <all other values>
- Vibe

**Permit Status**

- <all other values>
- Special Conditions
- No Permits
- Westhope3D AREA
- Ownership
- Buffers



- State: North Dakota  
 County(s): Bottineau  
 Projection: Lambert Conformal Conic Two Parallel  
 Coordinates System: U.S. State Plane  
 Units: U.S. Survey Feet  
 Zone: North Dakota North  
 Datum: NAD 27  
 Ellipsoid: Clarke 1866  
 Westhope 3D 4-30-2015
- Westhope Postplot Receivers
  - Westhope Source Postplots
  - Source Offset Arcs
- Utility**
- <all other values>
  - Power
  - Fiber Optic
- Haz\_Point**
- <all other values>
  - Deadfall
  - Dropoff
  - Hole
  - Other
- Water\_Well**
- <all other values>
  - Windmill
- Point Feature**
- Tank Battery
  - Silo
- Structure**
- <all other values>
  - Barn
  - Building
  - House
- Oil\_Gas\_Well**
- <all other values>
  - Oil
- Landmark**
- <all other values>
  - Radio Tower
- Gate**
- <all other values>
  - Normal
- Tank\_Dam**
- <all other values>
  - Dirt
- Road**
- <all other values>
  - Gravel
  - Paved
  - Two Track
  - Railroad
- Haz\_Line**
- <all other values>
  - Caution
  - Danger
- Water\_Body**
- <all other values>
  - Wetland
- Access\_Route**
- <all other values>
  - Vibe
- Permit Status**
- <all other values>
  - Special Conditions
  - No Permits
  - Westhope3D AREA
  - Ownership
  - Buffers

Westh  
Landing

GREA



**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): Global Geophysical Services Inc

PERMIT NUMBER: 97-0260

**AFFIDAVIT OF COMPLETION (GEOPHYSICAL CONTRACTOR)**

STATE OF North Dakota )

COUNTY OF Bottineau )

Before me, Karen F. Larson, a Notary Public in and for the said  
County and State, this day personally appeared Judy Hakala

who being first duly sworn, deposes and says that (s)he is employed by St Croix Seismic  
, 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.

Judy Hakala  
Geophysical Contractor Representative

Subscribed in my presence and sworn before me this 3rd day of March, 2015.

KAREN F. LARSON  
Notary Public  
State of North Dakota  
My Commission Expires Oct. 12, 2016

Notary Public Karen F. Larson

My Commission Expires Oct. 12, 2016



# 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.<br>97-0260 |  |
| Shot Hole Operations  | *Non-Explosive Operations<br>Vibroseis |

## SECTION 1

|   |                                 |
|---|---------------------------------|
| Geophysical Contractor<br>Global Geophysical Services Inc 13927 South Gessner Rd, Missouri City, TX 77489 |                                 |
| Project Name and Number<br>Westhope 3D  | County(s)<br>Bottineau          |
| Township(s)<br>163N   | Range(s)<br>80W                 |
| Drilling and Plugging Contractors   |                                 |
| Date Commenced<br>February 15, 2015   | Date Completed<br>March 3, 2015 |

## SECTION 2

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

## SECTION 3

|   |
|---|
| Flowing Holes and/or Blowouts<br>S.P.#s   |
| Procedure for Plugging Flowing Holes and/or Blowouts  |
| 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).



# 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.dmr.nd.gov/oilgas/](http://www.dmr.nd.gov/oilgas/)

February 17, 2015

Dale Kluck  
Global Geophysical Services, Inc.  
13927 South Gessner Road  
Missouri City, TX 77489

RE: WESTHOPE 3-D  
GEOPHYSICAL EXPLORATION PERMIT # 97-0260  
BOTTINEAU BURKE COUNTY  
NON EXPLOSIVE METHOD

Dear Mr. Kluck:

Please be advised that we are in receipt of your Geophysical Exploration permit application and it is conditionally approved; effective for one year from February 17, 2015. **PURSUANT TO NDAC 43-02-12-05 (DISTANCE RESTRICTION) non-explosive exploration method may not be conducted not less than 300 feet from a water well, building, underground cistern, pipelines, and flowing spring. 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. An Image file (.img) on an SD card or email: [ttorstenson@nd.gov](mailto: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. 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.
  5. 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.
  6. 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/>
  7. 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<br>Global Geophysical Services, Inc  |                     | Address<br>13927 South Gessner Road, Missouri City, TX 77489 |  |                                     |  |
| Contact<br>Dale Kluck  |                     | Telephone<br>(832) 367-8885                                  |  | Fax                                 |  |
| Surety Company<br>Westchester Fire Insurance Company   |                     | Bond Amount<br>\$25,000.00                                   |  | Bond Number<br>K09046665            |  |
| 2) a. Subcontractor(s)   |                     | Address  |  | Telephone                           |  |
| b. Subcontractor(s)  |                     | Address  |  | Telephone                           |  |
| 3) Party Manager<br>Dale Kluck   |                     | Address (local)<br>Unknown                                   |  | Telephone (local)<br>(832) 367-8885 |  |
| 4) Project Name or Line Numbers<br>Westhope 3D   |                     |  |  |                                     |  |
| 5) Exploration Method (Shot Hole, Non-Explosive, 2D, 3D, Other)<br>Non Explosive 3D  |                     |  |  |                                     |  |
| 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.<br><input type="checkbox"/> 660 feet - Shot Hole - Distance setbacks apply to water wells, buildings, underground cisterns, pipelines, and flowing springs. |                     |  |  |                                     |  |
| 7) Size of Hole<br>3-D   | Amt of Charge<br>NA | Depth<br>NA  | Source points per sq. mi.<br>225             | No. of sq. mi.<br>Approx 5          |  |
| Size of Hole<br>2-D  | Amt of Charge       | Depth  | Source points per ln. mi.                    | No. of ln. mi.                      |  |
| 8) Approximate Start Date<br>February 15, 2015   |                     |  | Approximate Completion Date<br>April 1, 2015 |                                     |  |

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

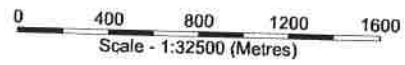
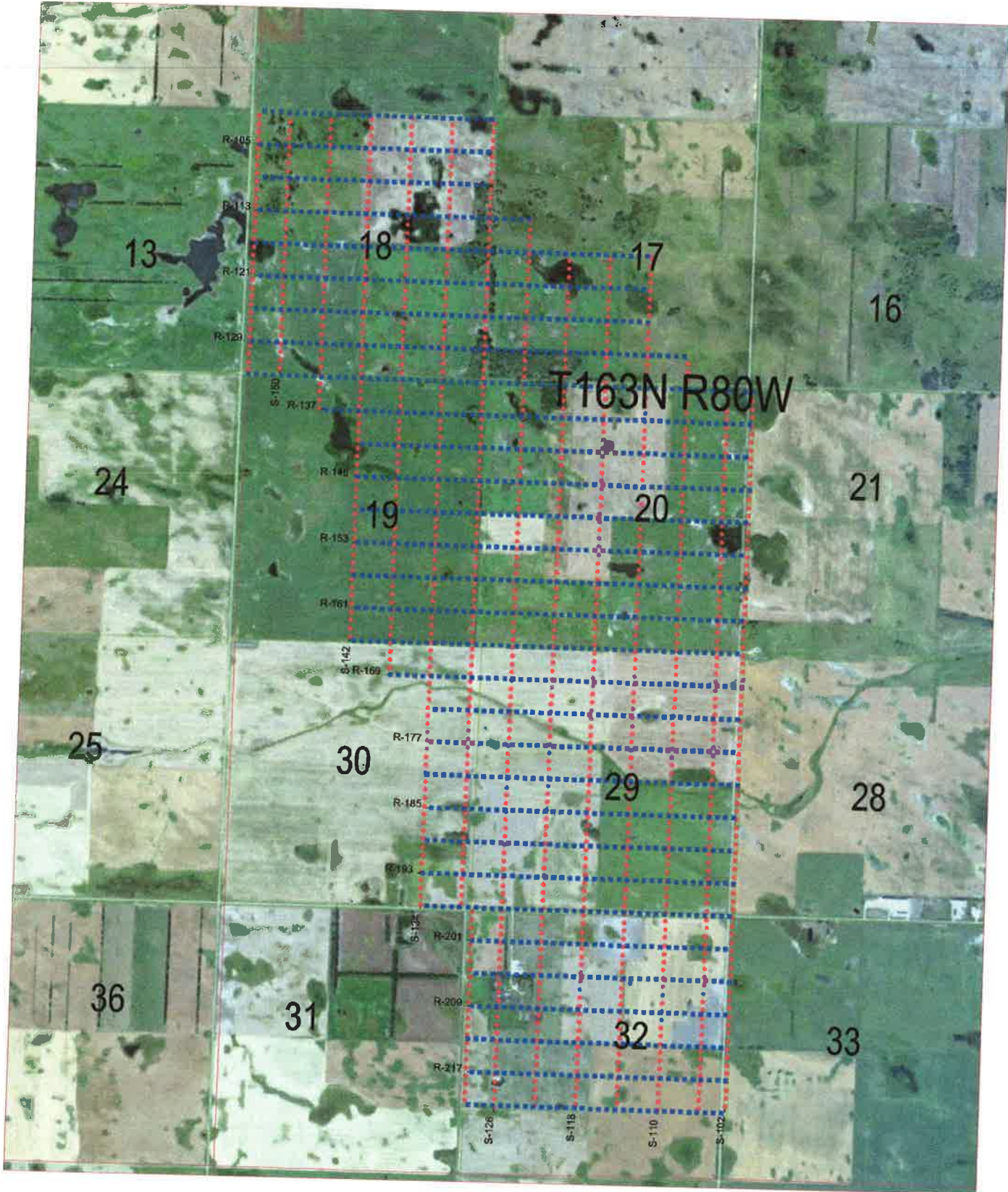
|   |         |                            |    |      |    |     |
|---|---------|----------------------------|----|------|----|-----|
| 9) Location of Proposed Project - County<br>Bottineau |         |                            |    |      |    |     |
| Section(s),<br>Township(s)<br>& Range(s)              | Section | 17, 18, 19, 20, 29, 30, 32 | T. | 163W | R. | 80W |
|   | 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 2/15/2015

|   |                               |  |
|---|-------------------------------|--|
| Signature<br><i>Judith Hakala</i>       | Printed Name<br>Judith Hakala | Title<br>Permit Agent St Croix Seismic |
| Email Address(es)<br>judyinmpls@msn.com |                               |  |

|   |                            |  |
|---|----------------------------|--|
| (This space for State office use)         |                            | <b>Permit Conditions</b><br><br>* Permit in hand required at pre-program meeting with field inspector and be aware of all NDIC Rules and Regulations (i.e. distance restrictions).<br><br>* See attached letter. |
| Permit No.<br>97-0260                     | Approval Date<br>2/17/2015 |  |
| Approved by<br><i>John C. H. Weg</i>      |                            |  |
| Title<br>Mineral Resources Permit Manager |                            |  |

\*See Instructions On Reverse Side



**Parameters**

|                        |         |
|------------------------|---------|
| Receiver Line Interval | 200m    |
| Source Line Interval   | 250m    |
| Receiver Interval      | 50m     |
| Source Interval        | 50m     |
| Patch                  | 12 X 60 |



# 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.dmr.nd.gov/oilgas/](http://www.dmr.nd.gov/oilgas/)

February 17, 2015

The Honorable LISA HERBEL  
Bottineau County Auditor  
314 West 5<sup>th</sup>  
Bottineau, ND 58318-1204

RE: Geophysical Exploration  
Permit # 97-0260

Dear Ms. HERBEL:

Pursuant to Section 38-08.1-04.2 of the North Dakota Century Code, please be advised that Global Geophysical Services, Inc. was issued the above captioned permit on February 17, 2015 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,

Todd L. Holweger  
Mineral Resources Permit Manager



P.O. BOX 190 ■ Gordon, WI 54838

Judy Hakala  
5410 72 Circle N  
Minneapolis, MN 55429

Email: judyimpls@msn.com

Cell: 612 990-7273



February 15, 2015

Mr. Todd Holweger  
Regulatory Supervisor  
Industrial Commission of North Dakota  
Oil & Gas Division  
600 East Boulevard Ave, Dept 405  
Bismarck, North Dakota 58505-0840

RE: Application for Geophysical Exploration Permit for Westhope 3D Project

Dear Mr Holweger:

On behalf of Global Geophysical Services, Inc., I hereby request a permit for the above referenced seismic operations. Please accept enclosed as application following the emailed permit.

We are in somewhat of a time crunch, your permit states minimum of 3 business days, so I am hopeful that it can be approved within that timeframe.

I have enclosed

- Form GE 1
- 8 ½ by 11 plat of the proposed project area
- \$100.00 check for the permit fee

Thank you in advance for processing this permit request.

All appropriate notifications will be made advising Tom Torstenson of our progress. Also he will receive electronic copies of permits and ½ mile letters.

Should you have any questions or comments regarding the attached documents or scheduling, please contact me by cell phone 612 990-7273.

Regards,

Judy Hakala  
St. Croix Seismic  
Permit Agent  
612 990-7273



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



## FORM GE 1 FILING AUTHORIZATION

COMPANY NAME: Global Geophysical Services, Inc

ADDRESS: 13927 South Gessner Rd

CITY: Missouri City STATE: TX ZIP: 77351

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>E-Mail Address</u> | <u>Phone Number</u> |
|-------------------------------|-----------------------|---------------------|
| Judy Hakala                   | judyinmpls@msn.com    | 612 990-7273        |

Company Authorized Signature: *[Signature]* Date: 2-11-15  
 Printed Name: Dale Kluck Title: Party Manager Crew 445  
 Phone: 832-367-8885 Email Address: dale.kluck@globalgeophysical.com

\*\*\*\*\*  
 Witness Signature: *[Signature]* Date: 2.11.15  
 Witness Printed Name: Jason P. Kelly



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
01/27/2015

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

|  |  |  |                        |
|--|--|--|------------------------|
| <b>PRODUCER</b><br>Marsh USA Inc.<br>500 Dallas St, Suite 1500<br>Houston, TX 77002<br>Attn: houston.certs@marsh.com<br><br>178099-CAS-14-15 | <b>CONTACT NAME:</b><br>PHONE (A/C, No, Ext):<br>E-MAIL ADDRESS: |  | <b>FAX (A/C, No):</b>  |
|  | <b>INSURER(S) AFFORDING COVERAGE</b>                             |  |                        |
| <b>INSURED</b><br>Global Geophysical Services, Inc.<br>13927 S. Gessner Road<br>Missouri City, TX 77489                                      | <b>INSURER A:</b> Starr Indemnity & Liability Company            |  | <b>NAIC #</b><br>38318 |
|  | <b>INSURER B:</b> American Guarantee & Liability Ins Co          |  | 26247                  |
|  | <b>INSURER C:</b>  |  |                        |
|  | <b>INSURER D:</b>  |  |                        |
|  | <b>INSURER E:</b>  |  |                        |
| <b>INSURER F:</b>  |  |  |                        |

|                  |   |                           |
|------------------|---|---------------------------|
| <b>COVERAGES</b> | <b>CERTIFICATE NUMBER:</b> HOU-002360464-01 | <b>REVISION NUMBER:</b> 1 |
|------------------|---|---------------------------|

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

| INSR LTR | TYPE OF INSURANCE  | ADDL INSR | SUBR WVD | POLICY NUMBER   | POLICY EFF (MM/DD/YYYY) | POLICY EXP (MM/DD/YYYY) | LIMITS  |              |
|----------|--|-----------|----------|-----------------|-------------------------|-------------------------|---|--------------|
| A        | <b>GENERAL LIABILITY</b><br><input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY<br><input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR<br><input checked="" type="checkbox"/> SIR - \$100,000<br><input checked="" type="checkbox"/> POLLUTION: Sudden & Accidental<br>GEN'L AGGREGATE LIMIT APPLIES PER:<br><input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC |           |          | SISINRG00100414 | 04/01/2014              | 04/01/2015              | EACH OCCURRENCE   | \$ 1,000,000 |
|          |  |           |          |                 |                         |                         | DAMAGE TO RENTED PREMISES (Ea occurrence)   | \$ 1,000,000 |
|          |  |           |          |                 |                         |                         | MED EXP (Any one person)  | \$ 10,000    |
|          |  |           |          |                 |                         |                         | PERSONAL & ADV INJURY   | \$ 1,000,000 |
|          |  |           |          |                 |                         |                         | GENERAL AGGREGATE   | \$ 2,000,000 |
|          |  |           |          |                 |                         |                         | PRODUCTS - COMP/OP AGG  | \$ 2,000,000 |
|          |  |           |          |                 |                         |                         |   | \$           |
| A        | <b>AUTOMOBILE LIABILITY</b><br><input checked="" type="checkbox"/> ANY AUTO<br><input type="checkbox"/> ALL OWNED AUTOS<br><input type="checkbox"/> HIRED AUTOS<br><input type="checkbox"/> SCHEDULED AUTOS<br><input type="checkbox"/> NON-OWNED AUTOS  |           |          | SISIPCA08258914 | 04/01/2014              | 04/01/2015              | COMBINED SINGLE LIMIT (Ea accident)   | \$ 1,000,000 |
|          |  |           |          |                 |                         |                         | BODILY INJURY (Per person)  | \$           |
|          |  |           |          |                 |                         |                         | BODILY INJURY (Per accident)  | \$           |
|          |  |           |          |                 |                         |                         | PROPERTY DAMAGE (Per accident)  | \$           |
|          |  |           |          |                 |                         |                         |   | \$           |
| B        | <input checked="" type="checkbox"/> <b>UMBRELLA LIAB</b> <input checked="" type="checkbox"/> OCCUR<br><input type="checkbox"/> <b>EXCESS LIAB</b> <input type="checkbox"/> CLAIMS-MADE<br>DED <input type="checkbox"/> RETENTION \$  |           |          | AUC 9243160-02  | 04/01/2014              | 04/01/2015              | EACH OCCURRENCE   | \$ 5,000,000 |
|          |  |           |          |                 |                         |                         | AGGREGATE   | \$ 5,000,000 |
|          |  |           |          |                 |                         |                         |   | \$           |
| A        | <b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b><br>ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)<br>If yes, describe under DESCRIPTION OF OPERATIONS below  |           |          | 100 0001170-01  | 04/01/2014              | 04/01/2015              | <input checked="" type="checkbox"/> WC STATUTORY LIMITS<br><input type="checkbox"/> OTHER |              |
|          |  |           |          |                 |                         |                         | E.L. EACH ACCIDENT  | \$ 1,000,000 |
|          |  |           |          |                 |                         |                         | E.L. DISEASE - EA EMPLOYEE  | \$ 1,000,000 |
|          |  |           |          |                 |                         |                         | E.L. DISEASE - POLICY LIMIT   | \$ 1,000,000 |

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)  
 Westhope 3D 2015- 11.8² km (118.53 linear km)

|   |   |
|---|---|
| <b>CERTIFICATE HOLDER</b><br>Resonance Energy Ltd<br>c/o LXL Consulting Ltd | <b>CANCELLATION</b><br>SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. |
|   | <b>AUTHORIZED REPRESENTATIVE</b><br>of Marsh USA Inc.<br>Patrick R. Hedrick <i>Patrick R. Hedrick</i>   |

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# 3D Design Parameter Sheet



DATE: 17-Dec-14  
 CLIENT: Resonance Energy / LXL Consulting Ltd.  
 PROSPECT NAME: Westhope 3D  
 LOCATION: TWP 163  
 BIN SIZE: 25 m X 25 m

Geometry Type: Orthogonal

VERSION: 1.01

AREA:  
 Surface ~ 11.8 km<sup>2</sup>  
 Live Bins ~ 12.9 km<sup>2</sup>

RNG 80

COUNTRY North Dakota, USA

SPCS North Dakota North DATUM: NAD 27

| RECEIVER INFORMATION       |                                       | SOURCE INFORMATION       |                                |
|----------------------------|---------------------------------------|--------------------------|--------------------------------|
| LINE ORIENTATION:          | <u>E-W</u>                            | LINE ORIENTATION:        | <u>N-S</u>                     |
| NO. OF RECEIVER POINTS:    | <u>1278</u>                           | NO. OF SOURCE POINTS:    | <u>1137</u>                    |
| RECEIVER DENSITY:          | <u>107.87</u> / km <sup>2</sup>       | SOURCE DENSITY:          | <u>95.97</u> / km <sup>2</sup> |
| RECEIVER ARRAY:            | <u>TBA</u>                            | SOURCE TYPE:             | <u>TBA</u>                     |
| RECEIVER INTERVAL:         | <u>50</u> m                           | SOURCE INTERVAL:         | <u>50</u> m                    |
| RECEIVER LINE INTERVAL:    | <u>200</u> m                          | SOURCE LINE INTERVAL:    | <u>250</u> m                   |
| TOTAL KM OF RECEIVER LINE: | <u>62.35</u> km                       | TOTAL KM OF SOURCE LINE: | <u>56.18</u> km                |
| NO. RECEIVER LINES:        | <u>31</u>                             | NO. OF SOURCE LINES:     | <u>14</u>                      |
| NO. OF RECEIVERS PER L     | MINIMUM: <u>28</u> MAXIMUM: <u>63</u> | STATION STAGGER:         | <u>triple</u>                  |
| STATION STAGGER:           | <u>triple</u>                         |                          |                                |

| TECHNICAL DETAILS                     |                 |
|---------------------------------------|-----------------|
| MAX-MIN OFFSET (AT CENTER OF CELL)    | <u>320.15</u> m |
| LINE INTERVAL ASPECT RATIO (RL/SL)    | <u>0.80</u>     |
| PATCH ASPECT RATIO (INLINE/CROSSLINE) | <u>2.82</u>     |

| RECORDING PARAMETERS          |                                  |               |                   |
|-------------------------------|----------------------------------|---------------|-------------------|
| MAX STATIONS REQUIRED ON CREW | <u>774</u>                       |               |                   |
| NOTCH FILTERS IN/OUT          | FILTERS LOW CUT <u>      </u> Hz | RECORD LENGTH | <u>      </u> sec |
| FORMAT                        |                                  |               |                   |

| PATCH INFORMATION      |                      |                         |                       |
|------------------------|----------------------|-------------------------|-----------------------|
| NO. STATIONS RECORDED: | <u>756</u>           |                         |                       |
| PATCH LAY OUT:         | <u>12 X 63</u>       |                         |                       |
| PATCH DIMENSIONS:      | N-S <u>2200</u> m    | E-W <u>3100</u> m       |                       |
| RECORDING OFFSETS:     | INLINE <u>3100</u> m | CROSSLINE <u>1100</u> m | OBLIQUE <u>3289</u> m |

**SCRIPTS MUST BE CREATED BY BJV TO INSURE ACCURATE SHOOTING**

| FOLD: OFFSET LIMITED |              | USEABLE OFFSET : DEPTH RATIO: <u>1 : 1</u> |                            |
|----------------------|--------------|--|----------------------------|
| Formation            | Depth        | Offset                                     | FOLD                       |
|                      | <u>250m</u>  | OFFSET 1 <u>0</u> - <u>250</u> m           | FOLD <u>0</u> - <u>2</u>   |
|                      | <u>500m</u>  | OFFSET 2 <u>0</u> - <u>500</u> m           | FOLD <u>2</u> - <u>6</u>   |
|                      | <u>750m</u>  | OFFSET 3 <u>0</u> - <u>750</u> m           | FOLD <u>7</u> - <u>10</u>  |
|                      | <u>1000m</u> | OFFSET 4 <u>0</u> - <u>1000</u> m          | FOLD <u>14</u> - <u>17</u> |
|                      | <u>1250m</u> | OFFSET 5 <u>0</u> - <u>1250</u> m          | FOLD <u>22</u> - <u>26</u> |
|                      | <u>1500m</u> | OFFSET 6 <u>0</u> - <u>1500</u> m          | FOLD <u>30</u> - <u>33</u> |

| PATCH TYPE            |               |
|-----------------------|---------------|
| ALL LIVE:             | <u>      </u> |
| ROLL COMPLETE LINES:  | <u>x</u>      |
| ROLL ON/OFF:          | <u>      </u> |
| ROLL IN (# OF LINES): | <u>7</u>      |

Date

Client Signature



**BOL EOL Lists**



DATE: 17-Dec-14

CLIENT: Resonance Energy / LXL Consulting Ltd.

PROSPECT NAME: Westhope 3D

VERSION: 1.01

LOCATION: CORNER 163

RNG 80 0

COUNTRY North Dakota, USA

| RECEIVER LIST |          |          |        |          |
|---------------|----------|----------|--------|----------|
| LIVE          | BOL      | EOL      | POINTS | KM's     |
| R-101         | R-101135 | R-101163 | 29     | 1.4      |
| R-105         | R-105135 | R-105163 | 29     | 1.4      |
| R-108         | R-108135 | R-108162 | 28     | 1.35     |
| R-113         | R-113130 | R-113163 | 34     | 1.65     |
| R-117         | R-117115 | R-117163 | 49     | 2.4      |
| R-121         | R-121145 | R-121162 | 48     | 2.35     |
| R-125         | R-125115 | R-125163 | 49     | 2.4      |
| R-129         | R-129110 | R-129163 | 54     | 2.65     |
| R-133         | R-133101 | R-133163 | 63     | 3.1      |
| R-137         | R-137102 | R-137154 | 53     | 2.6      |
| R-141         | R-141102 | R-141149 | 48     | 2.35     |
| R-145         | R-145101 | R-145149 | 40     | 2.4      |
| R-149         | R-149102 | R-149149 | 48     | 2.35     |
| R-153         | R-153102 | R-153149 | 48     | 2.35     |
| R-157         | R-157101 | R-157149 | 40     | 2.4      |
| R-161         | R-161102 | R-161149 | 48     | 2.35     |
| R-165         | R-165102 | R-165149 | 48     | 2.35     |
| R-169         | R-169101 | R-169144 | 44     | 2.15     |
| R-173         | R-173102 | R-173139 | 38     | 1.85     |
| R-177         | R-177102 | R-177139 | 38     | 1.85     |
| R-181         | R-181101 | R-181139 | 39     | 1.9      |
| R-185         | R-185102 | R-185139 | 38     | 1.85     |
| R-189         | R-189102 | R-189139 | 38     | 1.85     |
| R-193         | R-193101 | R-193139 | 39     | 1.9      |
| R-197         | R-197102 | R-197139 | 38     | 1.85     |
| R-201         | R-201102 | R-201133 | 32     | 1.55     |
| R-205         | R-205101 | R-205132 | 32     | 1.55     |
| R-209         | R-209102 | R-209133 | 32     | 1.55     |
| R-213         | R-213102 | R-213133 | 32     | 1.55     |
| R-217         | R-217101 | R-217132 | 32     | 1.55     |
| R-221         | R-221102 | R-221133 | 32     | 1.55     |
| Total         |          |          | 1278   | 62.35 km |

| SOURCE LIST |          |          |        |           |
|-------------|----------|----------|--------|-----------|
| LIVE        | BOL      | EOL      | POINTS | KM's      |
| S-102       | S-102133 | S-102220 | 88     | 4.35      |
| S-106       | S-106133 | S-106220 | 88     | 4.35      |
| S-110       | S-110129 | S-110220 | 82     | 4.55      |
| S-114       | S-114117 | S-114220 | 104    | 5.15      |
| S-118       | S-118117 | S-118220 | 104    | 5.15      |
| S-122       | S-122117 | S-122220 | 104    | 5.15      |
| S-126       | S-126113 | S-126221 | 109    | 5.4       |
| S-130       | S-130101 | S-130220 | 120    | 5.984     |
| S-134       | S-134101 | S-134106 | 96     | 4.75      |
| S-138       | S-138101 | S-138168 | 68     | 3.35      |
| S-142       | S-142101 | S-142164 | 64     | 3.15      |
| S-146       | S-146101 | S-146136 | 36     | 1.75      |
| S-150       | S-150101 | S-150132 | 32     | 1.55      |
| S-154       | S-154101 | S-154132 | 32     | 1.55      |
| Total       |          |          | 1137   | 56.184 km |