



# 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>970251</b>	
Shot Hole Operations	*Non-Explosive Operations <b>Canyon 2-D</b>

## SECTION 1

Geophysical Contractor <b>Geokinetics USA Inc.</b>	
Project Name and Number <b>Canyon 2-D</b>	County(s) <b>Bottineau</b>
Township(s) <b>163N</b>	Range(s) <b>79W</b>
Drilling and Plugging Contractors <b>N/A</b>	
Date Commenced <b>November 30, 2014</b>	Date Completed <b>December 4, 2014</b>

## 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 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).



**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): Canyon 2-D

PERMIT NUMBER: 970251

**AFFIDAVIT OF COMPLETION (GEOPHYSICAL CONTRACTOR)**

STATE OF Montana )

)

COUNTY OF Hill )

Before me, JENA HANSON, a Notary Public in and for the said

County and State, this day personally appeared Rickie A Scheetz

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

Geokinetics USA Inc., that (s)he has read North Dakota

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

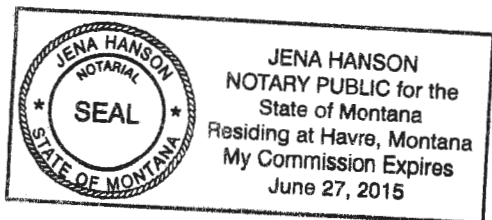
accordance with North Dakota Administrative Code Rule 43-02-12 and that the statements on

the reverse side of this document are true.

[Signature]

Geophysical Contractor Representative

Subscribed in my presence and sworn before me this 18<sup>th</sup> day of December, 2014.



Notary Public Jena Hanson

My Commission Expires 6-27-15

# Affidavit of Compliance

AFFIDAVIT OF David Hennig

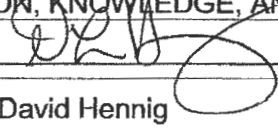
Name: David Hennig

Occupation: Manager of Inland Geoservices LLC

I, David Hennig, affirm:

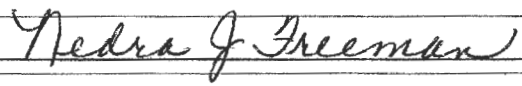
1. That I am the manager of Inland Geoservices LLC, with offices located in Brazoria County, Texas.
2. That Inland Geoservices LLC was hired to obtain seismic permits in Bottineau County ND for the Placer Canyon 2D project.
3. That Inland Geoservices LLC has satisfied and sent the required notifications set forth in NDCC 38-11.1-04.1.

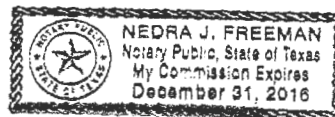
I AFFIRM THAT THE ABOVE AND FOREGOING REPRESENTATIONS ARE TRUE AND CORRECT TO THE BEST OF MY INFORMATION, KNOWLEDGE, AND BELIEF.

<u>03/03/2015</u>	
Date	David Hennig

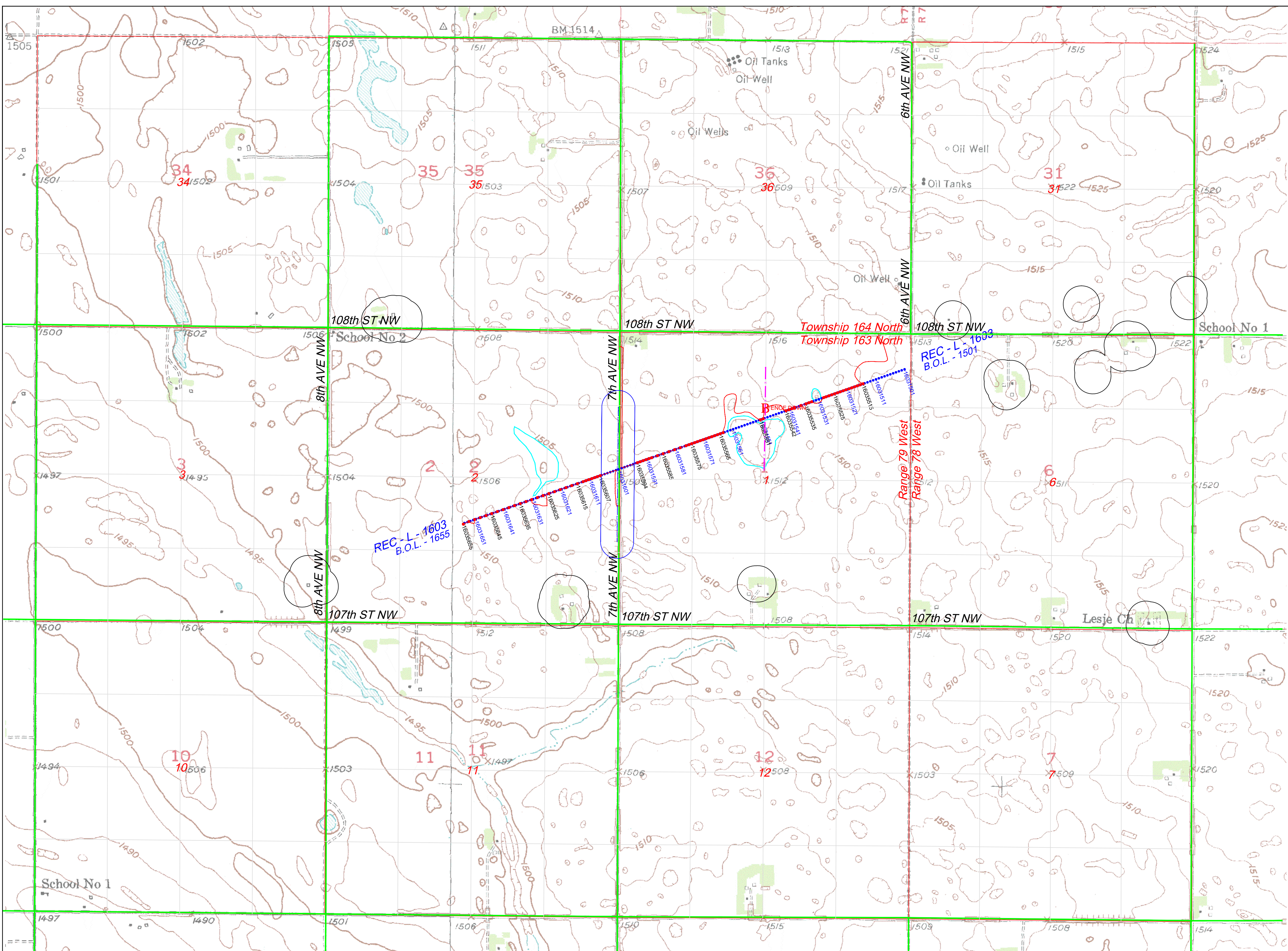
STATE OF TEXAS  
COUNTY OF BRAZORIA

I, the undersigned Notary Public, do hereby affirm that David Hennig personally appeared before me on the 3<sup>rd</sup> day of March 2015, and signed the above Affidavit as his free and voluntary act and deed.

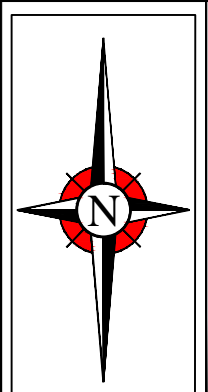
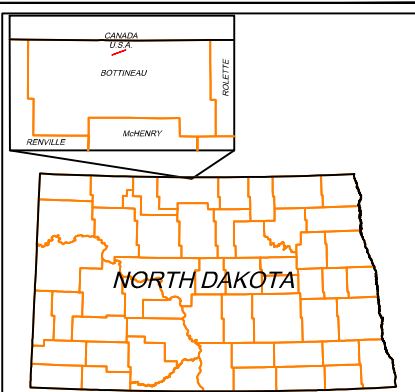
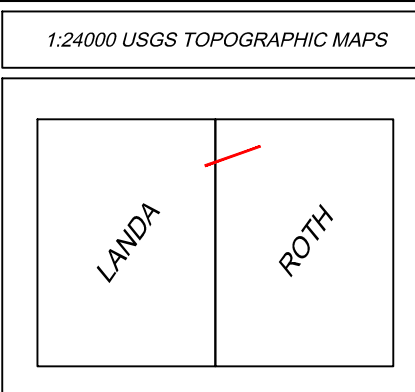
	
	Notary Public







Client:  
**FLATIRONS RESOURCES, L.L.C.**



CANYON 2-D POSTPLOT MAP BOTTINEAU CO., NORTH DAKOTA TOWNSHIPS: 163 & 164 NORTH RANGES: 79 WEST RECEIVER PT. INTERVAL: 55' SOURCE PT. INTERVAL: 55' VIBROSEIS	NAD27 NORTH DAKOTA STATE PLANE NORTH ZONE TOTAL RECEIVER POINTS: 372 TOTAL SOURCE POINTS: 371 AREA (LINEAR MILES): 4.1 : 3.84 RECEIVER LINE INTERVAL: N/A SOURCE LINE INTERVAL: N/A RECEIVER LINE AZIMUTH: ??'??'??'??' SOURCE LINE AZIMUTH: ??'??'??'??' SCALE: 1:12000 NOVEMBER 29, 2014 1" = 1000'
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GPS CONTROL POINT SUMMARY				NDSPC NORTH ZONE		
STATION ID	SET	OPUS / RTK	WGS84 LATITUDE	WGS84 LONGITUDE	ELLIP HEIGHT	ORTHO HEIGHT
?????	?????	?????	49.257272 N	100.257272 W	?????	?????

## LEGEND

NATIONAL GRASSLAND	FENCE	RESTRICTED AREA - 330 FT
BUREAU OF LAND MANAGEMENT	GATE	CEMETERY
STATE	LETDOWN	AIRPORT
U.S. ARMY CORPS OF ENGINEERS	LETDOWN FENCE	INTERSTATE HIGHWAY
NATIONAL FISH AND WILDLIFE SERVICE	OFF-ROAD ACCESS	U.S. HIGHWAY
CONDITIONAL PERMITS	DRYHOLES	STATE HIGHWAY
CABLE / WALK ONLY PERMITS	OIL / GAS WELLS	COUNTY ROAD
NO PERMITS	CONTROL POINTS	
PRIMARY HIGHWAY	PREPLOT RECEIVERS	
IMPROVED ROAD	POSTPLOT RECEIVERS	
PRIMITIVE ROAD	POSTPLOT SOURCE - VIBES	
GAS PIPELINES	POSTPLOT SOURCE - CONV. DRILLS	
WATER PIPELINES	POSTPLOT SOURCE - BUGGY DRILLS	
POWER LINES	POSTPLOT SOURCE - HELI DRILLS	
TELEPHONE LINES	HAZARDS	

E.C.S. INC. IS NOT LIABLE FOR UNDERGROUND UTILITIES. ALL TOPO FEATURES ON THIS MAP ARE APPROXIMATE ONLY. IT IS E.C.S. INC. POLICY TO STAKE ALL SOURCE POINTS A MINIMUM OF 1320 FT. FROM WATERWELLS, SPRINGS, OILWELLS, AND / OR ANY OTHER STRUCTURES. ANY SOURCE POINTS CLOSER THAN 1320 FT. TO THE ABOVE REFERENCED ITEMS HAVE BEEN UNDER THE DIRECTION OF THE CLIENT. THEREFORE, E.C.S. INC. ASSUMES NO LIABILITY ON ANY SOURCE POINTS CLOSER THAN 1320 FT. TO THE ABOVE MENTIONED ITEMS.





# GEOPHYSICAL EXPLORATION SUNDRY NOTICE - FORM GE 4

INDUSTRIAL COMMISSION OF NORTH DAKOTA  
OIL AND GAS DIVISION  
600 EAST BOULEVARD DEPT 405  
BISMARCK, ND 58505-0840  
SFN 51458 (03-2011)



PERMIT # 970251

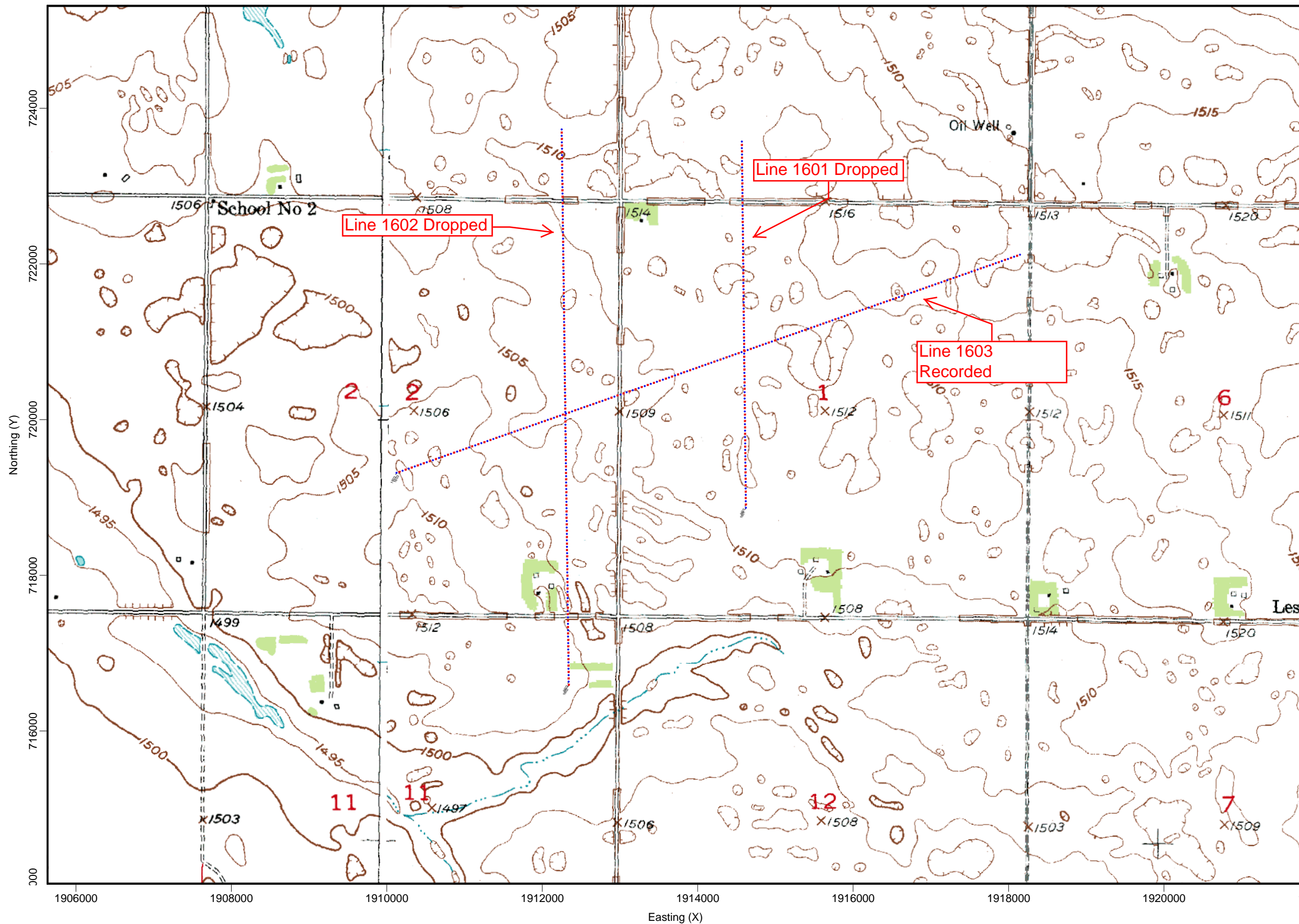
Project Name <b>Canyon 2-D</b>
County <b>Bottineaux County</b>
Supplemental Information <b>Lines 1601 and 1602 were cancelled by client.</b>

Company <b>Geokinetics USA Inc.</b>		Telephone Number <b>(281) 620-7041</b>	
Address <b>1500 Citywest Blvd. Ste. 800</b>			
City <b>Houston</b>		State <b>TX</b>	Zip Code <b>77042</b>
Signature 		Printed Name <b>Rick Scheetz</b>	
Title <b>Project Manager</b>		Date <b>December 10, 2014</b>	
Email Address <b>rick.scheetz@geokinetics.com</b>			

FOR STATE USE ONLY	
<input type="checkbox"/> Received	<input checked="" type="checkbox"/> Approved
Date <b>12/11/14</b>	
By 	
Title <b>Mineral Resources Permit Manager</b>	

# Canyon 2D, 55' RI x 55' SI

## Design Map



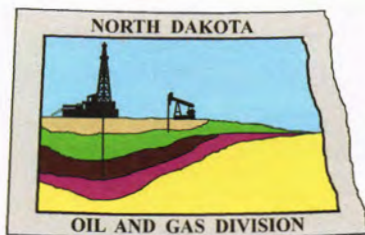
Date: 4-Mar-2014  
 Linear Miles: 3.84

Line #	Rec	Src	Distance
1601	86	86	0.89
1602	131	130	1.35
1603	155	155	1.60
<b>Total</b>	<b>372</b>	<b>371</b>	<b>3.84</b>

### Design

Group Interval: 55  
 Source Interval: 55  
 Type:  
 Bin Size: 27.5  
 Patch Size: All Live  
 Max. Fold:  
 Roll Stations: No

Bottineau Co. ND  
 SPCS ND North (FIPS 3301)  
 NAD 27, feet.



# 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/)

MARCH 18, 2014

VINCENT HANRAHAN  
PROJECT MANAGER  
GEOKINETICS USA, INC.  
1500 CITYWEST BLVD  
HOUSTON, TX 77042

RE: CANYON 2-D  
GEOPHYSICAL EXPLORATION PERMIT # 97-0251  
BOTTINEAU COUNTY  
NON-EXPLOSIVE METHOD

Dear MR. HANRAHAN:

Please be advised that we are in receipt of your Geophysical Exploration permit application and it is conditionally approved; effective for one year from MARCH 18, 2014. **PURSUANT TO NDAC 43-02-12-05 (DISTANCE RESTRICTION) non-explosive 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".**

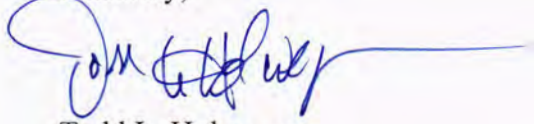
Review the following conditions for your permit:

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. 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. 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)



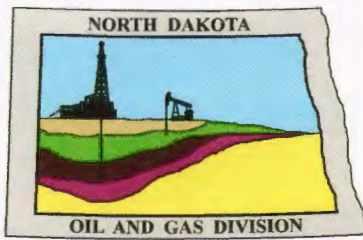
1) a. Company <b>Geokinetics Inc.</b>		Address <b>1500 Citywest Blvd. Suite 800, Houston TX. 77042</b>			
Contact <b>Vincent Hanrahan</b>		Telephone <b>(832) 776-8983</b>		Fax <b>(713) 706-3749</b>	
Surety Company <b>U.S. Specialty Insurance Company</b>		Bond Amount <b>\$50,000.00</b>		Bond Number <b>B004059</b>	
2) a. Subcontractor(s) <b>Erickson Contract Survey Inc.</b>		Address <b>333-10th Ave. S.E. Sidney MT. 59270</b>		Telephone <b>(406) 482-6606</b>	
b. Subcontractor(s) <b>Inland GeoServices, L.L.C.</b>		Address <b>122 WestWay, Lake Jackson TX. 77565</b>		Telephone <b>(979) 529-9157</b>	
3) Party Manager <b>Vincent Hanrahan</b>		Address (local) <b>818 N Central Ave. Kenmare ND</b>		Telephone (local) <b>(701) 385-4238</b>	
4) Project Name or Line Numbers <b>Canyon 2D</b>					
5) Exploration Method (Shot Hole, Non-Explosive, 2D, 3D, Other) <b>Vibroseis 2D</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 <b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	
Size of Hole	Amt of Charge	Depth	Source points per ln. mi.	No. of ln. mi.	
2-D <b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>48</b>	<b>3.84</b>	
8) Approximate Start Date <b>March 15, 2014</b>			Approximate Completion Date <b>April 15, 2014</b>		

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

9) Location of Proposed Project - County <b>Bottineau County</b>						
Section(s), Township(s) & Range(s)	Section	<b>NE 1,NW 1,SW 1</b>	T.	<b>163N</b>	R.	<b>79W</b>
	Section	<b>NE 2, SE 2</b>	T.	<b>163N</b>	R.	<b>79W</b>
	Section	<b>NE 11</b>	T.	<b>163N</b>	R.	<b>79W</b>
	Section	<b>SE 35</b>	T.	<b>164N</b>	R.	<b>79W</b>
	Section	<b>SW 36</b>	T.	<b>164N</b>	R.	<b>79W</b>
	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>March 5, 2014</b>
Signature <i>Vincent Hanrahan</i>	Printed Name <b>Vincent Hanrahan</b>	Title <b>Project Manager</b>	
Email Address(es) <b>vince.hanrahan@geokinetics.com</b>			

(This space for State office use)		<b>Permit Conditions</b>
Permit No. <b>970251</b>	Approval Date <b>3/18/14</b>	
Approved by <i>Tell 6906</i>		
Title <b>Mineral Resources Permit Manager</b>		
<ul style="list-style-type: none"> <li>* Permit in hand required at pre-program meeting with field inspector and be aware of all NDIC Rules and Regulations (i.e. distance restrictions).</li> <li>* See attached letter.</li> </ul>		



# 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/)

March 18, 2014

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

RE: Geophysical Exploration  
Permit # 97-0251

Dear Ms. HERBEL:

Pursuant to Section 38-08.1-04.2 of the North Dakota Century Code, please be advised that GEOKINETICS USA, INC. was issued the above captioned permit on March 18, 2014 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



# Canyon 2D, 55' RI x 110' SI

## Design Map

