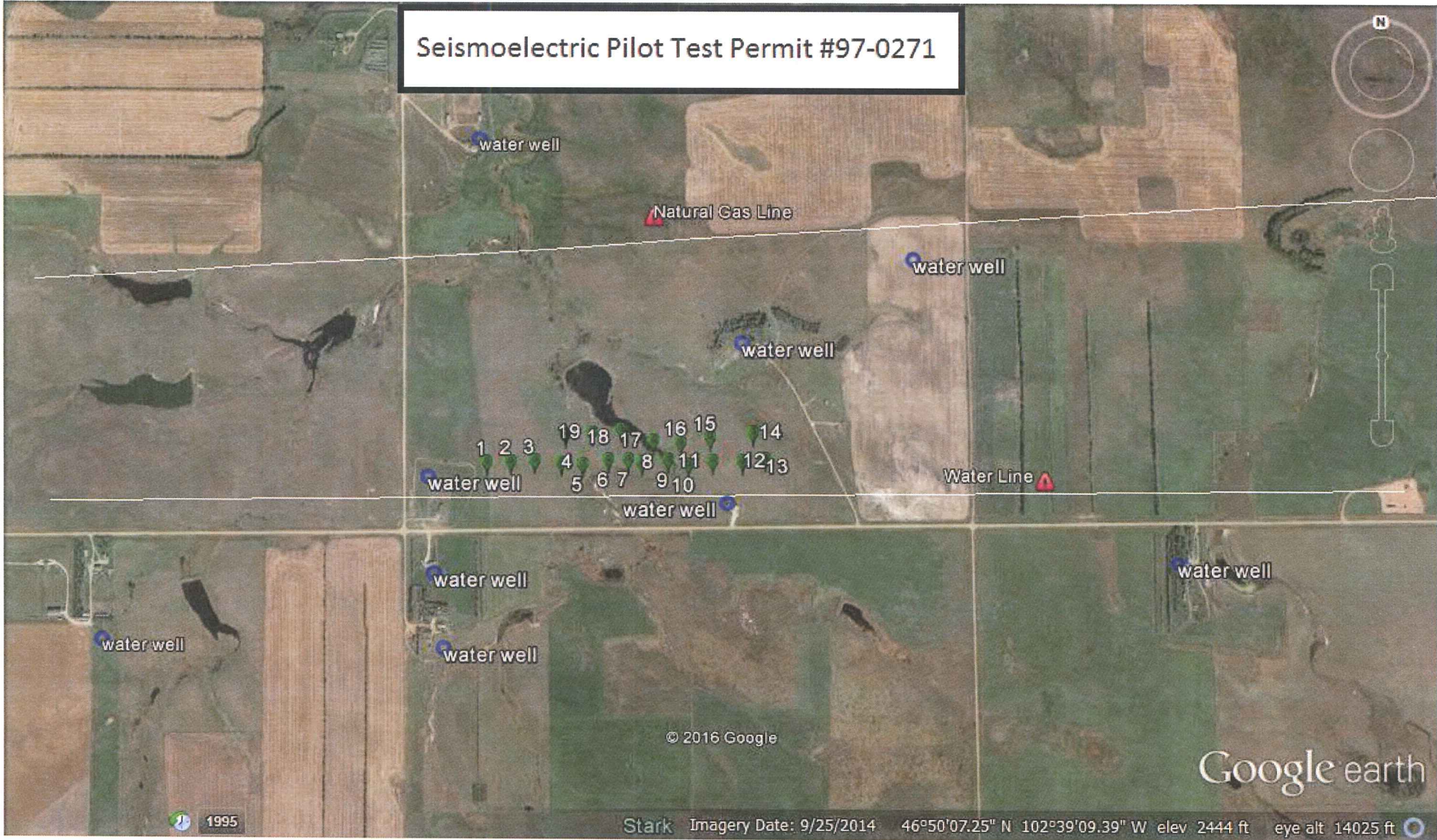


Seismoelectric Pilot Test Permit #97-0271



water well

Natural Gas Line

water well

water well

water well

Water Line

water well

water well

water well

water well

water well

© 2016 Google

Google earth

1995

Stark Imagery Date: 9/25/2014 46°50'07.25" N 102°39'09.39" W elev 2444 ft eye alt 14025 ft

STATE OF NORTH DAKOTA)

COUNTY OF MERCER)

) ss.


AFFIDAVIT OF JEFFREY L. SKAARE

Your Affiant, Jeffrey L. Skaare, being first duly sworn, deposes and states under oath as follows:

1. That my name is Jeffrey L. Skaare and I reside at 303 5th Ave. NW, Hazen, ND, 58545; and
2. That I am a familiar with ND Geophysical Exploration Permit 97-0271; and
3. That pursuant to the above referenced permit, I caused a title review of the surface owners within ½ mile of Township 139 North, Range 95 West, Section 22, South-Half to be completed; and
4. That I enclosed a cover letter and a copy of NDCC Section 38-08.1-04.1 (Exploration Permit) and NDCC Chapter 38-11.1 (Oil and Gas Production Damage Compensation) to each of the landowners and deposited the same into the U.S. Mail to the address listed in the Stark County tax assessor's office for the subject parcels.

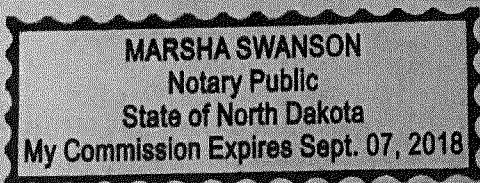
FURTHER YOUR AFFIANT SAYETH NOT.

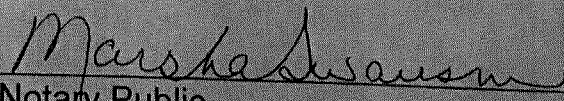
Dated this 19th day of September, 2016.


Jeffrey L. Skaare

Subscribed and sworn to before me this 19 day of September, 2016

(SEAL)




Notary Public
Mercer County, North Dakota
My commission expires: 9-7-18



GEOPHYSICAL EXPLORATION HOLE PLUGGING REPORT - FORM GE 7A

INDUSTRIAL COMMISSION OF NORTH DAKOTA
 OIL AND GAS DIVISION
 600 EAST BOULEVARD DEPT 405
 BISMARCK, ND 58505-0840
 SFN 51457 (03-2011)

Received

SEP 20 2016

ND Oil & Gas Division

Geophysical Company Great Plains Energy, Inc.	Date Plugged August 20, 2016
Hole Plugging Contractor Great Plains Energy, Inc.	Permit No. 97-0271
Prospect Seismoelectric Pilot Test 2-D	Hole Plugger Dan Blankenau

Line No.	S.P. No.	Hole Depth	Drill Type *CABP	Wet/ Dry	Bent. Sx	Bent. Capsules	Capsule Size**	Surface Plug Depth	Remarks Hole Bridged, Thick Mud, Etc.
1	1	32"	Auger	DRY	.125	Chip	3/8"	0	
2	2	32"	Auger	DRY	.125	Chip	3/8"	0	
3	3	32"	Auger	DRY	.125	Chip	3/8"	0	
4	4	32"	Auger	DRY	.125	Chip	3/8"	0	
5	5	32"	Auger	DRY	.125	Chip	3/8"	0	
6	6	32"	Auger	DRY	.125	Chip	3/8"	0	
7	7	32"	Auger	DRY	.125	Chip	3/8"	0	
8	8	32"	Auger	DRY	.125	Chip	3/8"	0	
9	9	32"	Auger	DRY	.125	Chip	3/8"	0	
10	10	32"	Auger	DRY	.125	Chip	3/8"	0	
11	11	32"	Auger	DRY	.125	Chip	3/8"	0	
12	12	32"	Auger	DRY	.125	Chip	3/8"	0	
13	13	32"	Auger	DRY	.125	Chip	3/8"	0	
14	14	32"	Auger	DRY	.125	Chip	3/8"	0	
15	15	32"	Auger	DRY	.125	Chip	3/8"	0	
16	16	32"	Auger	DRY	.125	Chip	3/8"	0	
17	17	32"	Auger	DRY	.125	Chip	3/8"	0	
18	18	32"	Auger	DRY	.125	Chip	3/8"	0	
19	19	32"	Auger	DRY	.125	Chip	3/8"	0	
20	20	32"	Auger	DRY	.125	Chip	3/8"	0	

*Conventional-Auger-Buggy-Portable

**Diameter X Length



GEOPHYSICAL EXPLORATION AFFIDAVIT OF PLUGGING (HOLE PLUGGER) - FORM GE 7B

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
600 EAST BOULEVARD DEPT 405
BISMARCK, ND 58505-0840
SFN 51457 (03-2011)

Received
SEP 20 2016
ND Oil & Gas Division

PERMIT NAME (Required): Seismoelectric Pilot Test 2-D

PERMIT NUMBER: 97-0271

AFFIDAVIT OF PLUGGING (HOLE PLUGGER)

STATE OF Nebraska)

COUNTY OF Lancaster)

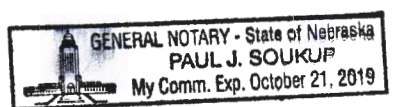
Before me, Paul J. Soukup a Notary Public in and for the said
County and State, this day personally appeared Daniel F. Blankenau

who being first duly sworn, deposes and says that (s)he is employed by
Great Plains Energy, Inc., that (s)he has read North Dakota

Century Code Section 38-08.1 and that the foregoing seismic project has been plugged in
accordance with North Dakota Administrative Code Rule 43-02-12 and that the statements on
the attached documents are true.

[Signature]
Hole Plugger Representative

Subscribed in my presence and sworn before me this 19th day of September, 2016



Notary Public [Signature]

My Commission Expires 10/21/19



GEOPHYSICAL EXPLORATION COMPLETION REPORT - FORM GE 6 Received

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

SEP 20 2016

ND Oil & Gas Division

Permit No. 97-0271	
Shot Hole Operations Great Plains Energy, Inc.	*Non-Explosive Operations N/A

SECTION 1

Geophysical Contractor Great Plains Energy, Inc.	
Project Name and Number Seismoelectric Pilot Test 2-D	County(s) Stark
Township(s) 139 North	Range(s) 95 West
Drilling and Plugging Contractors Gear Plains Energy, Inc.	
Date Commenced August 20, 2016	Date Completed August 20, 2016

SECTION 2

First S.P. # 1	Last S.P. # 20										
Loaded Holes (Undetonated Shot Points) 0											
S.P.#'s	20										
Charge Size	18 grm										
Depth	32"										
Reasons Holes Were Not Shot All holes were shot.											

SECTION 3

Flowing Holes and/or Blowouts S.P.#'s N/A
Procedure for Plugging Flowing Holes and/or Blowouts All holes were filled with bentonite.
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).



Received

SEP 20 2016

ND Oil & Gas Division

PERMIT NAME (Required): Seismoelectric Pilot Study 2-D

PERMIT NUMBER: 97-0271

AFFIDAVIT OF COMPLETION (GEOPHYSICAL CONTRACTOR)

STATE OF Nebraska)

COUNTY OF Lancaster)

Before me, Paul J. Soukup, a Notary Public in and for the said

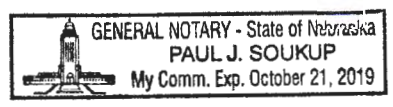
County and State, this day personally appeared Daniel F. Blankenau

who being first duly sworn, deposes and says that (s)he is employed by Great Plains Energy, 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 19th day of September, 2016.



Notary Public [Signature]

My Commission Expires 10/21/2019



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)

Received

PERMIT # 97-0271

SEP 20 2016

ND Oil & Gas Division

Project Name
Seismoelectric Pilot Test 2-D

County
Stark

Supplemental Information
Due to better than expected surface and weather conditions aquisition went much better than anticipated. Consequently Great Plains Energy, Inc. requested permission from NDIC Field Inspector permission to conduct 20 shot points rather than the 8 planned. Verbal approval was granted with the instruction to submit FORM GE 4 and plug the additional shot points with bentonite.

Company Great Plains Energy, Inc		Telephone Number (402) 443-6125	
Address 6121 South 58th St., Ste. B			
City Lincoln	State NE	Zip Code 68516	
Signature 	Printed Name Daniel F. Blankenau		
Title President	Date September 19, 2016		
Email Address dan@greatplainsenergyinc.com			

FOR STATE USE ONLY	
<input type="checkbox"/> Received	<input checked="" type="checkbox"/> Approved
Date	9/20/2016
By	
Title	Mineral Resources 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.dmr.nd.gov/oilgas

August 18, 2016

Mr. Daniel F. Blankenau
President
Great Plains Energy, Inc.
6121 South 58th, Ste. "B"
Lincoln, NE 68516

RE: SEISMOELECTRIC PILOT TEST 2-D
GEOPHYSICAL EXPLORATION PERMIT #97-0271
STARK COUNTY
EXPLOSIVE METHOD

Dear Mr. Blankenau:

Please be advised that we are in receipt of your Geophysical Exploration permit application and it is conditionally approved; effective for one year from August 18, 2016. **PURSUANT TO NDAC 43-02-12-05 (DISTANCE RESTRICTION) explosive exploration method may not be conducted not less than 660 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. Provide a GIS layer using NAD83 in an Esri shape file format (if available) and an Image file (.img) on a Flash Drive or email: ttorstenson@nd.gov with all source and receiver points,
 - e. Affidavit 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 4.
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

Received

AUG 18 2016

ND Oil & Gas
Division



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 Great Plains Energy, Inc.		Address 6121 south 58th St., Ste. "B", Lincoln NE 68516			
Contact Dan Blankenau		Telephone (402) 904-4092		Fax (402) 904-4092	
Surety Company Lexon Insurance Company		Bond Amount \$5000.00		Bond Number 1116842	
2) a. Subcontractor(s) Petrolocate (Trainer)		Address 5700 100 St. SW Lakewood WA 98499		Telephone (800) 215-3350	
b. Subcontractor(s)		Address		Telephone	
3) Party Manager Dan Blankenau		Address (local) N/A		Telephone (local) (402) 443-6125	
4) Project Name or Line Numbers Seismoelectric Pilot Test 2-D					
5) Exploration Method (Shot Hole, Non-Explosive, 2D, 3D, Other) Seismoelectric w/ shallow shot holes.					
6) Distance Restrictions (Must check all that apply)					
<input type="checkbox"/> 300 feet - NonExplosive - Distance setbacks apply to water wells, buildings, underground cisterns, pipelines, and flowing springs					
<input checked="" 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	Amt of Charge	Depth	Source points per sq. mi.	No. of sq. mi.	
2-D 1 1/4"	18 grams	32"	8	1	
8) Approximate Start Date August 20, 2016			Approximate Completion Date August 20, 2016		

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

9) Location of Proposed Project - County Stark County					
Section(s), Township(s) & Range(s)	Section	22	T.	139N	R. 95W
	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 August 17, 2016
Signature 	Printed Name Daniel F. Blankenau	Title President	
Email Address(es) dan@greatplainsenergyinc.com			

(This space for State office use)	
Permit No. 97-0271	Approval Date 8/18/16
Approved by 	
Title Mineral Resources Permit Manager	

Permit Conditions

- * Permit in hand required at pre-program meeting with field inspector and be aware of all NDIC Rules and Regulations (i.e. distance restrictions).
- * See attached letter.

*See Instructions On Reverse Side



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

August 18, 2016

The Honorable Kay Haag
STARK County Auditor
P.O. BOX 130
DICKINSON, ND 58602-0130

RE: Geophysical Exploration
 Permit #97-0271

Dear Ms. Haag:

Pursuant to Section 38-08.1-04.2 of the North Dakota Century Code, please be advised that Great Plains Energy, Inc. was issued the above captioned permit on August 18, 2016 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 black ink, appearing to read "Todd L. Holweger".

Todd L. Holweger
DMR Permit manager

ND T139N R95W Section 22

ND T139N R95W

Legend

- Quarter
- Section
- ⊙ Wannar 22-1
- ▲ Shot Point
- ⊕ Receiver

Wannar 22-1

Google earth

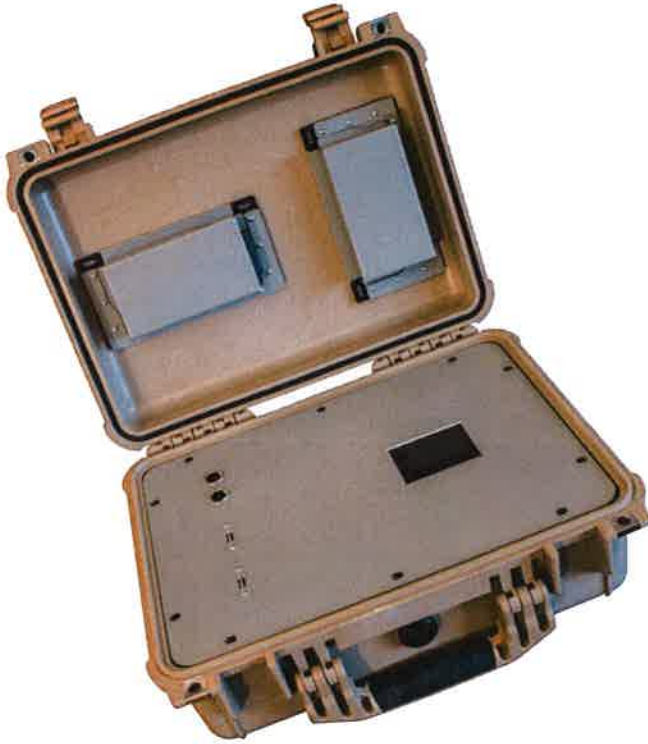
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3000 ft



PetroLocate™

Petroleum Location Technology



Extended Exploration Depth Coming In 2016.

50% Deeper Reach

PL14

Oil and Gas Exploration Technology for the 21st Century

Much of the information provided on the following pages can also be found at www.petrolocate.com or www.aqualocate.com

INTRODUCTION

In today's world there is a universal need for oil and gas to provide fuel and lubricants to our vehicles and power generation equipment as well as support the demand for plastics and other materials made from oil byproducts. Until now only big companies could afford modern exploration technology. Unfortunately, even most of the current technology wasn't capable of directly detecting the precious oil and gas reserves so many are seeking. Additionally, the deployment of much of the current technology used for oil and gas exploration is either not possible due to the size of the area needed for testing or the prohibitive costs associated with the deployment of those technologies.

Historically, the only effective way to find oil and gas supplies has been by very expensive rock structure exploration techniques like seismic testing and drilling. If the oil play or gas reserve is deep then a very large piece of property would need to be available to complete seismic testing. Drilling is an effective but very costly exploration method. The modern oil industry grew in the early twentieth century when drilling was replaced by seismic as the principal exploration method. Seismic reduced exploration costs tenfold and oil exploration and development companies rapidly grew richer. It is time for the oil exploration and development companies to take the next step by using the PetroLocate PL14 seismoelectric oil and gas exploration technology. Seismoelectric testing can be accomplished on relatively small oil/gas leases. Mostly Helmholtz and Clark Maxwell worked out the science in the nineteenth and early twentieth century. Seismoelectric signals were observed during experiments conducted during the fifties through the eighties and largely with oil industry support. Dr. Clarke and Dr. Millar investigated these experiments while still in the oil industry, causing them to decide to leave and set up a company (in 1994) to promote seismoelectric technology.

GF developed the seismoelectric instrument the GF3500, which was in production until early 2012 and is an effective surface survey instrument. The PL14 is a completely new version of the original system designed by GF with its patented signal detection technology which images mobile resistive liquids including fresh water, oil and gas. PetroLocate's founders realize that the oil industry is now ready for seismoelectrics applications for the detection and quantification (depth and thickness) of deep fresh water, mobile oil and gas. The PL14 is the result of a ten-year development program and thirteen years of operation (headed up by Ervin Kraemer AquaLocate/PetroLocate Founder) around the world. A seismoelectric system has been recently developed by PetroLocate to develop an even more effective, robust and affordable system. The system has been tested on deep fresh water sources, mobile oil reserves and gas deposits at various locations. To date, there have been a dozen oil wells drilled behind PL14 exploration surveys with 11 of the 12 coming in as expected. The depth of these wells has ranged from about 2500 feet to nearly 5000 feet.

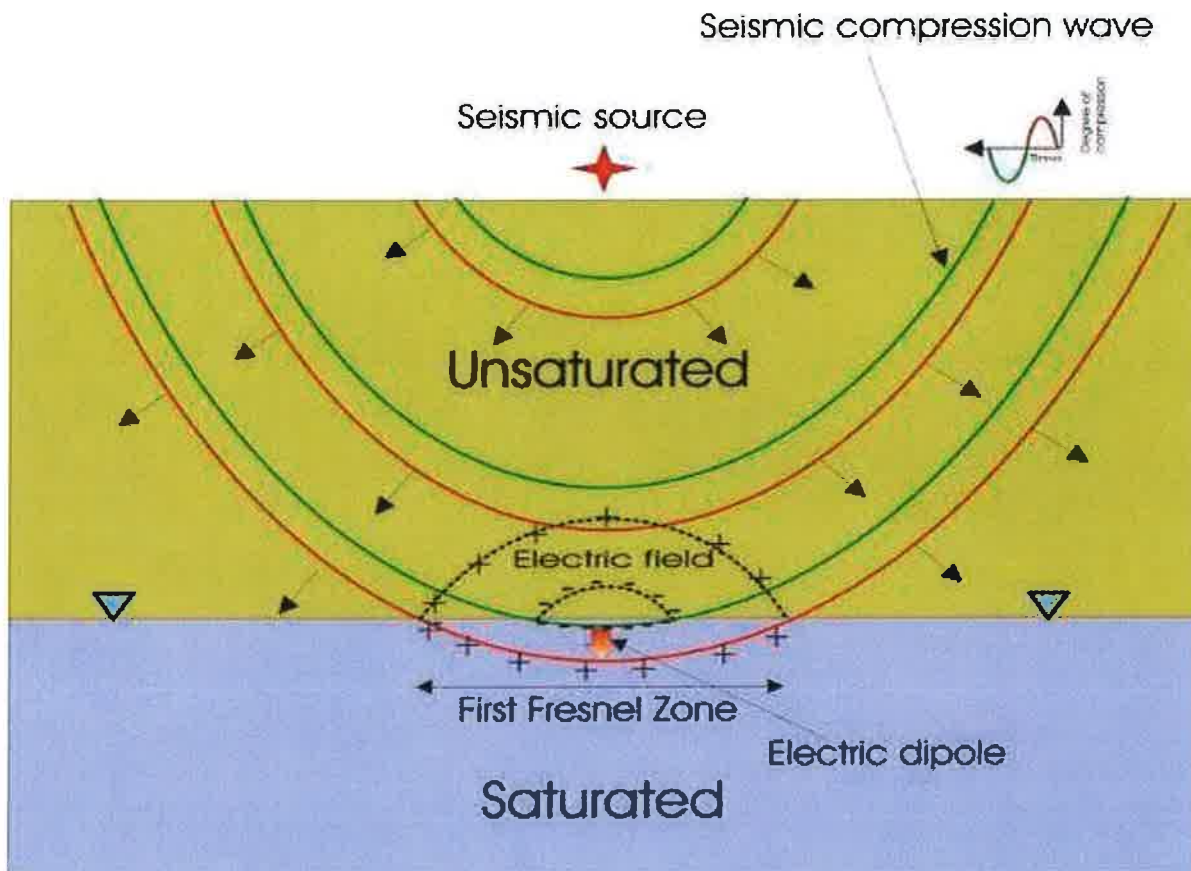
Seismoelectrics resembles seismic reflection surveying (seismic) but is a fundamentally simpler technique than seismic and uses simpler equipment. To operate the PL14 you should know how to use a personal computer. However, you do not need to be a Geophysicist, Geologist, or Hydro Geologist to operate the equipment successfully. The processing is mostly automatic and unlike nearly all other

geophysical techniques, if the target (groundwater, oil or gas) is absent, there will be no signal. No freshwater, oil or gas filled permeable layers equal no reproducible signal; it's as simple as that, provided that the data has been collected properly.

OPERATING PRINCIPLE

The PL14 receiver is designed to map aquifers and hydrocarbon reservoirs by measuring the seismoelectric signals produced by them. Seismoelectric (or "electrokinetic") signals are produced whenever water, mobile oil, or mobile gas is forced to move by the pressure changes associated with a seismic shot. As the sound wave from the shot moves through the ground it squashes the rock matrix rather like a sponge. The less-compressible resistive liquid is forced to move relative to the rock matrix. Although the distance moved is very small, typically much less than a millimeter, the resistive liquid carries free ionic charges away from their partners bound to pore surfaces. The resulting charge separation disturbs the electromagnetic field. The disturbance propagates to the surface at the speed of light and is detected by the antenna array, whenever the pressure pulse wave front crosses an interface separating rocks of differing properties; usually at bedding planes. There is extensive literature describing the formation and propagation of seismoelectric signals. Contact PetroLocate for details.

Signals are surprisingly strong. This is because of the geometry of the signal generating process, which *focuses* the signal back to the shot point. When a seismic shot is fired a sound impulse travels outwards in all downward directions. The hemispherical wave front (see diagram below) passes through different sediment and rock layers.



The sketch shows, at the lower left, the approximate shape of the sound pressure pulse. The initial part is strongly compressional, causing a positive pressure change. This is followed by a negative excursion.

The circular area encompassed by the leading edge of the pulse when the negative part is just intersecting the same layer is called the first Fresnel zone. This zone resembles the inner part of the "Fresnel lens" used in the rear window of many camper vans. The electrical response to the passing pressure wave adds up to zero when the sound passes through uniform rock but when it crosses boundaries, as between aquifer/reserves and non-aquifer/non-reserve rocks, large changes in the response across the boundary give rise to a net signal that perturbs the static electromagnetic field. This perturbation propagates to the surface at the speed of light and is detected by the antenna array. The curvature of the wave front and the Fresnel geometry ensures that the signal is tightly focused back to the shot point. This is true whether the rocks are horizontal or inclined (see below).

BEFORE THE INDUSTRIAL COMMISSION
OF THE STATE OF NORTH DAKOTA

CASE NO. 25057
ORDER NO. 27460

IN THE MATTER OF A HEARING CALLED ON A MOTION OF THE COMMISSION TO CONSIDER THE APPLICATION OF GREAT PLAINS ENERGY, INC., REQUESTING AN EXCEPTION TO THE BOND AMOUNT AS REQUIRED PURSUANT TO NDAC § 43-02-12-03 CONDUCTING SHOT-HOLE GEOPHYSICAL EXPLORATION WHILE UTILIZING NEW RECEIVER TECHNOLOGY IN SECTION 22, T.139N., R.95W., STARK COUNTY, ND AS PROVIDED FOR IN NDAC § 43-02-12-01.1.

ORDER OF THE COMMISSION

THE COMMISSION FINDS:

- (1) This cause came on for hearing at 9:00 a.m. on the 20th day of May, 2016.
- (2) The record in this case was left open to receive additional information from Great Plains Energy, Inc. (Great Plains). The Commission received such supplemental information on June 24, 2016 and the record was closed.
- (3) Great Plains is desirous of conducting geophysical operations in Stark County, North Dakota, utilizing small diameter shot holes less than three feet in depth and charged with a small amount of black powder.
- (4) Pursuant to North Dakota Administrative Code (NDAC) Section 43-02-12-03, geophysical exploration contractors shall file with the Commission a good and sufficient bond in the amount of \$50,000 if the contractor intends to conduct shot hole operations or in the amount of \$25,000 if the contractor intends to use any other method of geophysical exploration.
- (5) Great Plains indicated they plan a small scale project where approximately eight 1-1/2" diameter holes will be drilled to a depth of 32 inches and located across the S/2 of Section 22, Township 139 North, Range 95 West, Stark County, North Dakota. A maximum 18-gram black powder charge per shot hole will be utilized and Great Plains will attempt to obtain resistivity readings at the surface after the charge is detonated. Great Plains requests the geophysical exploration contractor be allowed to post a \$5,000 bond as an exception to NDAC Section 43-02-12-03.

(6) Pursuant to NDAC Section 43-02-12-01.1, the Commission may, after notice and hearing, grant exceptions to Chapter 43-02-12, when such exceptions will protect correlative rights.

(7) The Commission believes a typical geophysical exploration 3-D project, utilizing thousands of shot-holes drilled sometimes over 100 feet deep, warrants a \$50,000 bond. The Commission estimates the cost of plugging and reclaiming the eight shot holes in the proposed project will be considerably less than \$5,000 and relief from the bonding requirement should be granted.

(8) Granting this application will protect correlative rights.

IT IS THEREFORE ORDERED:

(1) Any geophysical exploration contractor conducting a project utilizing only small diameter shot holes less than three feet in depth and charged with a small amount of black powder is hereby allowed to file a \$5,000 bond for the purpose of conducting geophysical operations in Stark County, North Dakota, as an exception to NDAC Section 43-02-12-03.

(2) This order shall remain in full force and effect until further order of the Commission.

Dated this 29th day of June, 2016.

INDUSTRIAL COMMISSION
STATE OF NORTH DAKOTA

/s/ Jack Dalrymple, Governor

/s/ Wayne Stenehjem, Attorney General

/s/ Doug Goehring, Agriculture Commissioner