## SELF-CERTIFICATION STATEMENT FROM LESSEE/OPERATOR



#### SURFACE OWNER IDENTIFICATION

Well(s) Number and Location:

Rolfsrud 1-11H wells located in the S/2 of Section 11, T151N-R97W, McKenzie County, Dakota.	North
I hereby certify that I have reached one of the following agreements with the Surface Owner:	
1)X I have a signed access agreement to enter the leased lands;	
2) I have a signed waiver from the surface owner;	
3) I have an executed surface damage agreement from the surface owner regarding compensation for damages for loss of crops and tangible improvements and off spacing unit cuttings pit.	an
Surface Owner Name: Marcus Simpson CRI Surface Owner Address: Surface Owner Phone Number: Signed this 31 day of March, 2014.  Dan Flack, PTRRC Agent Burlington Resources Oil and Gas Company LP	
STATE OF Montana §  COUNTY OF Yellowstone §	
On this 28 <sup>th</sup> day of Atyust, in the year 2014, before me, personally ap	
known to me to be the person whose name is subscribed to the within instrument, and acknowledged	i to me
Notary Public in and for The State of North Dakota Printed Name: O YCC 2017 e	
Residing in: Billings Montana  SEAL Residing at Billings, Montana  (Scal) My Commission Expires December 20, 2016  Printed Name  Residing in: Billings Montana  MY COMMISSION EXPIRES: OCC. OC. OC.	<u></u>

## SELF-CERTIFICATION STATEMENT FROM LESSEE/OPERATOR



#### SURFACE OWNER IDENTIFICATION

Well(s) Number and Location:

	(-)	
Dakota	Sivertson 1-9H wells located in the SE/4 of Section 9 kota.	, T151N-R97W, McKenzie County, North
I herel	ereby certify that I have reached one of the following agreement	ents with the Surface Owner:
1)	1)X I have a signed access agreement to enter	er the leased lands;
2)	2) I have a signed waiver from the surface	owner;
3)	3) I have an executed surface damage a regarding compensation for damages for loss of crooff spacing unit cuttings pit.	greement from the surface owner ps and tangible improvements and an
Signed Oan F	Surface Owner Name: Marcus Simpson CRI Surface Owner Address: Surface Owner Phone Number: gned this S(	
	FATE OF Montana §  SOUNTY OF Yellowstone §	
	On this 23th day of August, in the y	ear 2014, before me, personally appeared
know	nown to me to be the person whose name is subscribed to the	within instrument, and acknowledged to me
that h	at he executed the same.	Heller
SEA	HOTARY PUBLIC for the State of Montana Residing at Billings, Montana Residing in:	in and for The State of North Dakota SOUTH PORTON Billings Montana SSION EXPIRES: DIC. 20, 2016
	(seal) MY COMMIS	DION EXPIRED: COLOCOTO

#### **SELF-CERTIFICATION STATEMENT** FROM LESSEE/OPERATOR





Well(s) Number and Location:

I hereby certify that I have reached one of the following agreements with the Surface Owner:  1) I have a signed access agreement to enter the leased lands;  2) I have a signed waiver from the surface owner;  3) X	Vibration Location #3, located in County, North Dakota.	the NE/4NW/4 of Section 16, T151N-R97W, McKenzie
2) I have a signed waiver from the surface owner;  3) X	I hereby certify that I have reached one of t	he following agreements with the Surface Owner:
3) X I have an executed surface damage agreement from the surface owner regarding compensation for damages for loss of crops and tangible improvements as we as road access.  Surface owner information: Surface Owner Name: Don and Sandie Sivertson Surface Owner Address: Surface Owner Phone Number: Signed this 10th day of August, 2014.  Dan Flack, PTRRC Agent Burlington Resources Oil and Gas Company LP  STATE OF Montana  \$ COUNTY OF Yellowstone  On this day of August, 2014, in the year 2014, before me, known to me to be person whose name is subscribed to the within instrument, and acknowledged to me that he executed same.  DANIEL CLUGSTON NOTARY PUBLIC to the State of Montana By Commission Expires February 21, 2018  Notary Public in and for The State of North Dakota Printed Name: Instrument Residing at Billings Montana Residing in: Billings Montana	1) I have a signed acc	ess agreement to enter the leased lands;
regarding compensation for damages for loss of crops and tangible improvements as we as road access.  Surface owner information: Surface Owner Name: Don and Sandie Sivertson Surface Owner Address: Surface Owner Phone Number: Signed this 19 <sup>th</sup> day of August, 2014.  Dan Flack, PTRRC Agent Burlington Resources Oil and Gas Company LP  STATE OF Montana  S COUNTY OF Yellowstone  On this day of August, in the year 2014, before me, known to me to be person whose name is subscribed to the within instrument, and acknowledged to me that he executed same.  DANIEL CLUGSTON NOTARY PUBLIC for the State of Montana Residing at Billings, Montana Residing at Billings, Montana Residing in: Billings Montana Residing in: Billings Montana	2) I have a signed wa	iver from the surface owner;
Surface Owner Name: Don and Sandie Sivertson Surface Owner Address: Surface Owner Phone Number: Signed this 19 <sup>th</sup> day of August, 2014.  Dan Flack, PTRRC Agent Burlington Resources Oil and Gas Company LP  STATE OF Montana  S COUNTY OF Yellowstone  On this day of August, in the year 2014, before me, known to me to be person whose name is subscribed to the within instrument, and acknowledged to me that he executed same.  DANIEL CLUGSTON NOTARY PUBLIC for the State of Montana Residing at Billings, Montana Residing at Billings, Montana My Commission Expires February 21, 2018  On the State of Montana Residing in: Billings Montana Residing in: Billings Montana Residing in: Billings Montana	regarding compensation for dam	
On this day of Angus, in the year 2014, before me, known to me to be person whose name is subscribed to the within instrument, and acknowledged to me that he executed same.  DANIEL CLUGSTON NOTARY PUBLIC for the State of Montana Reelding at Billings, Montana My Commission Expires February 21, 2018  DEAL Residing in: Billings Montana Residing in: Billings Montana	Surface Owner Name: Don and S Surface Owner Address: Surface Owner Phone Number: Signed this 19 <sup>th</sup> day of August, 2014.  Dan Flack, PTRRC Agent	
DANIEL CLUGSTON NOTARY PUBLIC for the State of Montana Residing at Billings, Montana My Commission Expires February 21, 2018  Residing in: Billings Montana Residing in: Billings Montana	•	§ § §
DANIEL CLUGSTON NOTARY PUBLIC for the State of Montana Residing at Billings, Montana My Commission Expires February 21, 2018  DANIEL CLUGSTON NOTARY PUBLIC in and for The State of North Dakota Printed Name:    Printed Name:	On this 20 day of Au	
(seal) MY COMMISSION EXPIRES: 2/21/2018	DANIEL CLUGSTON NOTARY PUBLIC for the State of Montana Residing at Billings, Montana My Commission Expires February 21, 2018	Printed Name: Line / Clug stort Residing in: Billings Montana

#### **SELF-CERTIFICATION STATEMENT** FROM LESSEE/OPERATOR



#### SURFACE OWNER IDENTIFICATION

Well(s)	Number and Location:
County	Vibration Location #2, located in the SE/4NW/4 of Section 16, T151N-R97W, McKenzie, North Dakota.
I hereby	certify that I have reached one of the following agreements with the Surface Owner:
1)	I have a signed access agreement to enter the leased lands;
2)	I have a signed waiver from the surface owner;
3)	X I have an executed surface damage agreement from the surface owner regarding compensation for damages for loss of crops and tangible improvements as well as road access.
Signed	owner information: Surface Owner Name: Don and Sandie Sivertson Surface Owner Address: Surface Owner Phone Number: this 19 <sup>th</sup> day of August, 2014.
	ton Resources Oil and Gas Company LP
	OF Montana §  SY OF Yellowstone §
person	On this day of, in the year 2014, before me, known to me to be the whose name is subscribed to the within instrument, and acknowledged to me that he executed the
Same.	DANIEL CLUGSTON  OTARY PUBLIC for the State of Montana fiesiding at Billings, Montana My Commission Expires February 21, 2016  MY COMMISSION EXPIRES:  Option  Notary Public in and for The State of North Dakota Printed Name:  Printed Name: Billings Montana  MY COMMISSION EXPIRES:  Option  MY COMMISSION EXPIRES:

# SELF-CERTIFICATION STATEMENT FROM LESSEE/OPERATOR



#### SURFACE OWNER IDENTIFICATION

Well(s) Number and Location:

Vibration Location #1, located in County, North Dakota.	the NW/4SE/4 of Section 15, T151N-R97W, McKenzie
I hereby certify that I have reached one of the	e following agreements with the Surface Owner:
1) I have a signed acce	ess agreement to enter the leased lands;
2) I have a signed wait	ver from the surface owner;
regarding compensation for dama as road access.	I surface damage agreement from the surface owner ages for loss of crops and tangible improvements as well
Surface owner information: Surface Owner Name: Don and Sa Surface Owner Address: Surface Owner Phone Number: Signed this 19 <sup>th</sup> day of August, 2014.  Dan Flack, PTRRC Agent Burlington Resources Oil and Gas Company	
STATE OF Montana  COUNTY OF Yellowstone	§ § §
	, in the year 2014, before me, known to me to be the
DANIEL CLUGSTON NOTARY PUBLIC for the State of Montana Reciding at Billings, Montana My Commission Expires February 21, 2018	Notary Public in and for The State of North Dakota Printed Name: Dane ( ) 1005/2011 Residing in: Billings Montana
(seal)	MY COMMISSION EXPIRES: 00/01/01/8



Dan Did I hear you correct yesterday saying that the self cert's you passed along were for this area?

Bullrush Well

#5
Possible Vibe

Possible Vibe #4 #3

Possible Vibe #2

Possible Vibe

#1

NAME	T	R	SECT	LONG	LAT	х	Υ
BR_VP_1	151N	97W	15	-103.075	47.898	2112268.6	17409925.2
BR_VP_2	151	97	16	-103.102	47.900	2105802.3	17410744.8
BR_VP_3	151	97	16	-103.105	47.903	2105054.2	17411636.5
BR_VP_4	151	97	9	-103.095	47.904	2107410.5	17412218.9
BR_VP_5	151	97	11	-103.056	47.905	2117034.9	17412726.6



My Commission Expires

#### 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 51458 (03-2011)

PERMIT NAME (Required): COP Bullrush

PERMIT NUMBER: 97-0255



# AFFIDAVIT OF COMPLETION (GEOPHYSICAL CONTRACTOR) STATE OF **COUNTY OF** MELA IN JOHNSON , a Notary Public in and for the said Before me, County and State, this day personally appeared who being first duly sworn, deposes and says that (s)he is employed by 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. Geophysical Confractor Representative Subscribed in my presence and sworn before me this PAMELA M. JOHNSON NOTARY PUBLIC STATE OF COLORADO Notary Public Con March NOTARY ID 19874101186 MY COMMISSION EXPIRES MAY 01, 2018



# GEOPHYSICAL EXPLORATION COMPLETION REPORT - FOR INDUSTRIAL COMMISSION OF NORTH DAKOTA

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

							¥ P	EC 129292		¥	
Permit No.								ECS 35 25	17.20		
97-0255											
Shot Hole Opera	tions				1	sive Operatio	)ns				
None				 	Yes						
SECTION 1											
Geophysical Con	itractor										
Halliburton E		vices		 	T					·	
Project Name an					County(s)						
Bullrush DSI	J Pad				McKenzie	e County		<del></del>	···		
Township(s)					Range(s)						
T151 Drilling and Plug	-las Cantract				R97W						
Driling and Fluy	Jing Conuacu	015								•	
Date Commence	be				Date Compl	eted					
November 9,	2014				Decembe	er 9, 2014					
SECTION 2											
First S.P. #					Last S.P. #						
Loaded Holes (U	ndetonated S	thot Points)									
S.P.#'s											
Charge Size											
Depth											
Reasons Holes V	Vere Not Sho	ń									
SECTION 3											
Flowing Holes ar	nd/or Blowout	s									
S.P.#'s											
Procedure for Pi	ugging Flowin	ng Holes and	Vor 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.

<sup>\*</sup>Non-Explosive Operations - Complete Section 1 and Affidavit (Form GE 6B).

#### 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 # 970255



Project Name	
COP Bullrush	
County	
McKenzie	
Supplemental Information	
2. Lat.: 47.89718 Lo 3. Lat.: 47.90504 Lo 4. Lat.: 47.90340 Lo	ong.: 103.07324 Sec.: 11 Twn.: 151N Rng.: 97W ong.: 103.07614 Sec.: 15 Twn.: 151N Rng.: 97W ong.: 103.09489 Sec.:9 Twn.: 151N Rng.: 97W ong.: 103.10597 Sec.: 16 Twn.: 151N Rng.: 97W ong.: 103.10229 Sec.: 16 Twn.: 151N Rng.: 97W
	ong.: -103.057183 Sec.: 12 Twn.: 151N Rng.: 97W
3. Lat.: 47.905036 L 4. Lat.: 47.916265 L	ong.: 103.076140 Sec.: 15 Twn.: 151N Rng.: 97W ong.: 103.094890 Sec.: 09 Twn.: 151N Rng.: 97W ong.: 103.107517 Sec.: 04 Twn.: 151N Rng.: 97W ong.: 103.043019 Sec.: 33 Twn.: 151N Rng.: 97W
	x met a text Tom Torstonson
	* Must contact
(	a 701-290-1546 with regular
	update 5.
	* * No vibe points w/in 300' of a pipeline
Company	Telephone Number

Company Telephone Number (303) 579-2088						FOF	R STATE USE ONLY
Address 15579 E Hinsdale Cir, Suite 102						Received	Approved **
City Centennial			CO	Zip Code 80112		Date     /	24/14
Signature	Liente	Printed Name Ben Bagheri	ian		K	Ву	1 to Was
Title Project Manager November 24, 2014			14		Title	Resources Permit Manager	
Email Address Ben.Bagherian@pinntech.com						Mineral	I VC20fffcc2 t etitte targenelles





Price Stark

Pinnacle - A Halliburton Service
15579 E. Hinsdale Cir. Ste 102

Centennial, CO 80112-6900

Phone: 303.579.2088

Fax: 303.766.4306

price.stark@pinntech.com

www.pinntech.com

11/21/2014

Mr. Todd Holweger NDIC tholweger@nd.gov

Pinnacle Microsesimic will be performing a vibe orientation for the upcoming treatment of the Bullrush DSU Pad lateral wells in McKenzie County, ND (S10, T151, R97W). The expected timeframe for this operation is Q4 of 2014. Expectation now is approximately late November 2014.

Pinnacle will rig-in a geophone toolstring in the nearby Bullrush No. 21-10PH vertical well in Q4 of 2014. These geophones require a known signal source to orient themselves to the physical world around them which will be accomplished using surface vibroseis signals.

This process will involve the use of a mini-vibroseis unit to perform 5, 12 second viberoseis sweeps at several locations in the surrounding area. An image of the vibroseis unit is provided in Figure 1. For the purposes of this project all vibe locations are on existing well pads or access roads. These vibe locations and their relative positions to the treatment and observation wells are provided below in Figure 2.

Due to the unknown nature of field operations the vibroseis orientation may need to be repeated during the fracture treatment if mechanical issues force the geophone toolstring to be replaced. This will involve a repeat of the same 12 second vibroseis sweeps at the same locations.



Figure 1 Halliburton Mini-Vibroseis Unit





Figure 2 Map View of Project Location and Vibe Positions

**Table 1 Vibe Locations** 

Location	Lat	Long	Sec	Twn	Rng
1	47.905705	103.057183	12	151N	97W
2	47.897184	-103.07614	15	151N	97W
3	47.905036	-103.09489	9	151N	97W
4	47.916265	-103.107517	4	151N	97W
5	47.935937	-103.043019	33	151N	97W

If there are any questions or concerns please contact me.

Sincerely,

Regards, Ben Bagherian Project Manager Pinnacle - a Halliburton service Cell: 303-249-0547

Ben.Bagherian@Pinntech.com

### Appendix A:



Figure 3 Map View of Vibe Position 1



Figure 4 Map View of Vibe Position 2

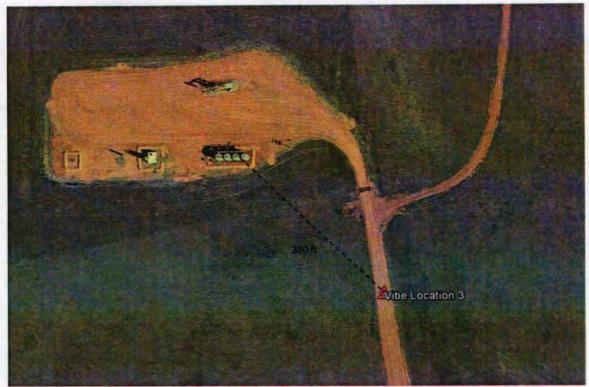


Figure 5 Map View of Vibe Position 3

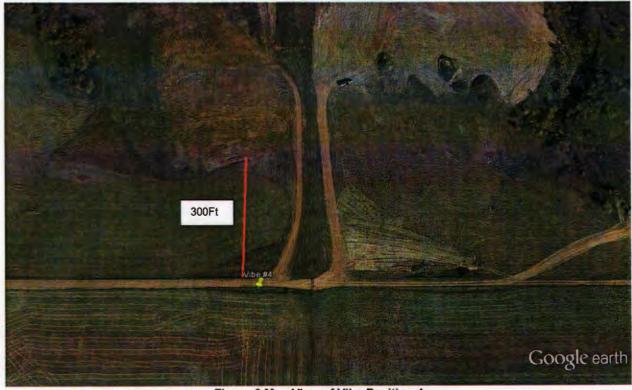


Figure 6 Map View of Vibe Position 4



Figure 7 Map View of Vibe Position 5



### 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 21, 2014

MR. PRICE STARK PROJECT MANAGER HALLIBURTON SERVICE 15579 E HINSDALE CIR. SUITE 102 CENTENNIAL, CO 80112

RE:

COP BULLRUSH

GEOPHYSICAL EXPLORATION PERMIT # 97-0255

MCKENZIE COUNTY

NON EXPLOSIVE METHOD

Dear MR. STARK:

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 21, 2014. 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. 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: <u>ttorstenson@nd.gov</u> 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: <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 regarding this matter, feel free to contact me at 701-328-8020, or Tom Torstenson at the number listed in paragraph 1.

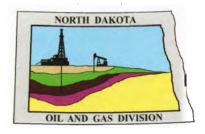
Sincerely,

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 SEN 51459 (03-2011)

SF	N 51459 (03-2011)					RE
1) a. Company Halliburton		Address 15579 E Hins	DIVISION			
Contact Price Stark		Telephone 303-579-2088		Fax 303-766-4306		GI BILL
Surety Company Westchester Fire I	nsurance Company	Bond Amount	\$25,000.	Bond Number 00 K08358977		<u> </u>
2) a. Subcontractor(s)		Address	- · · · · ·	Telephone	· · · · · · · · · · · · · · · · · · ·	
b. Subcontractor(s)		Address		Telephone		Port 1
3) Party Manager James White		Address (local)		Telephone (local) 214-616-7981		
4) Project Name or Line COP Bullrush	Numbers					
5) Exploration Method (S Non-explosive	Shot Hole, Non-Explosive, 2	D, 3D, Other)				
6) Distance Restrictions 300 feet - NonExp			s, buildings, underground ciste			S.
7) Size of Hole 3-D	Amt of Charge	Depth	Source points por eq. m	No. of sq. mi.		
Size of Hole 2-D	Amt of Charge	Depth	Source points per In. mi			
8) Approximate Start Da November 24, 2014			Approximate Compl December 4, 20			
		T LEAST 24 HOU	RS IN ADVANCE OF COMM	MENCEMENT OF GEO	PHYSIC	CAL OPERATIONS
9) Location of Proposed <b>McKenzie</b>	Project - County					
	Section	11	Т.	151	R.	97
	Section	15	Т.	151	R.	97
Section(s), Township(s)	Section	9	Т.	151	R. R.	97
& Range(s)	Section	16	Т.	⊤. <b>151</b>		97
	Section	16	Т.	т. <b>151</b>		97
	Section	T.			R.	
I hereby swear or affirm	that the information provide	ed is true, complete	and correct as determined fro	m all available records.	Date <b>July</b>	3, 2014
Signature	St	Printed Name Price Stark		Title Project Manager	•	
Email Address(es) price.stark@halliburton.o	com					,
				Permit Co	onditio	ns
Permit No. 976 Approved by	(This space for State of	Approval Date	/1 d	Permit in hand required a vith field inspector and bund Regulations (i.e. dis	e aware	of all NDIC Rules
Title	Mineral Resources Per	mit Manager	* 5	See attached letter.		



### 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 21, 2014

The Honorable Linda Svihovec McKenzie County Auditor P.O. Box 543 Watford City, ND 58854

RE:

Geophysical Exploration

Permit #97-0255

Dear Ms. Svihovec:

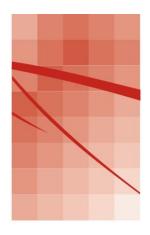
Pursuant to Section 38-08.1-04.2 of the North Dakota Century Code, please be advised that HALLIBURTON ENERGY SERVICES was issued the above captioned permit on August 21, 2014 will remain in effect for a period of one year. The entire permit can be viewed on our website at: https://www.dmr.nd.gov/oilgas/seismic/seismicstats.asp

Should you have any questions, please contact our office.

Sincerely,

DMR Permit Manager

600 E Boulevard Ave - Dept 405, Bismarck, North Dakota 58505-0840 Phone (701)328-8020 Fax (701)328-8022





Price Stark

Pinnacle - A Halliburton Service
15579 E. Hinsdale Cir. Ste 102

Centennial, CO 80112-6900

Phone: 303.579.2088

Fax: 303.766.4306

price.stark@pinntech.com

www.pinntech.com

4/21/2014

Mr. Todd Holweger NDIC tholweger@nd.gov

Pinnacle Microsesimic will be performing a vibe orientation for the upcoming treatment of the Bullrush DSU Pad lateral wells in McKenzie County, ND (S10, T151, R97W). The expected timeframe for this operation is Q3 of 2014.

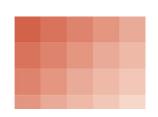
Pinnacle will rig-in a geophone toolstring in the nearby Bullrush No. 21-10PH vertical well in Q3 of 2014. These geophones require a known signal source to orient themselves to the physical world around them which will be accomplished using surface vibroseis signals.

This process will involve the use of a mini-vibroseis unit to perform 5, 12 second viberoseis sweeps at several locations in the surrounding area. An image of the vibroseis unit is provided in Figure 1. For the purposes of this project all vibe locations are on existing well pads or access roads. These vibe locations and their relative positions to the treatment and observation wells are provided below in Figure 2.

Due to the unknown nature of field operations the vibroseis orientation may need to be repeated during the fracture treatment if mechanical issues force the geophone toolstring to be replaced. This will involve a repeat of the same 12 second vibroseis sweeps at the same locations.



Figure 1 Halliburton Mini-Vibroseis Unit



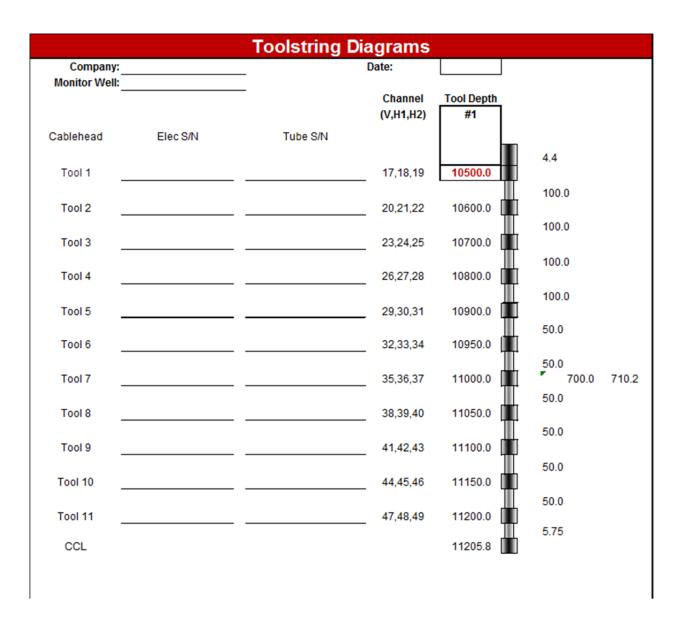




Figure 2 Map View of Project Location and Vibe Positions

**Table 1 Vibe Locations** 

Location	Lat	Long	Sec	Twn	Rng
1	47.905915	-103.073249	11	151N	97W
2	47.896286	-103.076002	15	151N	97W
3	47.906051	-103.09638	9	151N	97W
4	47.904002	-103.105209	16	151N	97W
5	47.899868	-103.102148	16	151N	97W

If there are any questions or concerns please contact me.

Sincerely,

Price Stark Project Manager

Pinnacle – a Halliburton Service

C: 303-579-2088

price.stark@pinntech.com

View Stock

### Appendix A:



Figure 3 Map View of Vibe Position 1



Figure 4 Map View of Vibe Position 2



Figure 5 Map View of Vibe Position 3



Figure 6 Map View of Vibe Position 4



Figure 7 Map View of Vibe Position 5