



# SEISMIC COMPLETION REPORT

INDUSTRIAL COMMISSION OF NORTH DAKOTA  
OIL AND GAS DIVISION  
600 EAST BOULEVARD DEPT 405  
BISMARCK, ND 58505-0840  
SFN 51456 (03-2005)

Permit No. <b>970099</b>	
Shot Hole Operations <b>XXX</b>	*Non-Explosive Operations

## SECTION 1

Geophysical Contractor <b>Grant Geophysical Corp.</b>	
Project Name and Number <b>Indian Hills 2-D Lines 1B,2,3</b>	County(s) <b>McKenzie</b>
Township(s) <b>149,153</b>	Range(s) <b>101,102,103</b>
Drilling and Plugging Contractors <b>Mark Mahlan</b>	
Date Commenced <b>April 9, 2005</b>	Date Completed <b>April 12, 2005</b>

## SECTION 2

First S.P. # <b>1b = 101101    2 = 201101    3 = 301101</b>	Last S.P. # <b>1b = 101261    2 = 201233    3 = 301245</b>												
Loaded Holes (Undetonated Shot Points) <b>N/A</b>													
S.P.#s													
Charge Size													
Depth													
Reasons Holes Were Not Shot													

## SECTION 3

Flowing Holes and/or Blowouts S.P.#s <b>301233</b>
Procedure for Plugging Flowing Holes and/or Blowouts <b>Back filled with cuttings/bentonite and loose dirt.</b>
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.

**AFFIDAVIT OF COMPLETION (GEOPHYSICAL CONTRACTOR)**

STATE OF Colorado )

COUNTY OF Adams )

Before me, Kristin Hansen, 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 \_\_\_\_\_

Grant Geophysical Corp., 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.

*Rickie A Scheetz*  
Geophysical Contractor Representative

Subscribed in my presence and sworn before me this 18<sup>th</sup> day of August, 2005.



Notary Public *Kristin Hansen*

My Commission Expires \_\_\_\_\_ My Commission Expires December 3, 2008

#970099

# WILLIAMS COUNTY GEOPHYSICAL EXPLORATION PERMIT



112

Fee Received 100.00

Name of Authorized Agent Rick Scheetz (281-620-7041)

Company Name Giant Geophysical Corp

Address 7309 Flint Rd SE

Calgary, AB, Canada

Phone 403-555-9383

Notice of intention to engage in geophysical exploration has been duly filed, number 745

A surety bond in the amount of \$ 50,000.00, Bond No. RLB 00002117 has been filed by the above named company.

Surety Company RLI Insurance Company

Address Houston TX

This permit shall be valid and effective for all geophysical crews of the permittee for a one-year period in which it is issued.

This permit or a photostatic copy thereof shall be carried at all times by a member of the crew during the period of geophysical exploration and shall be exhibited upon demand of the landowner or tenant operator or county or state official or respective surface owner.

Dated this 3rd day of August, 19 2005



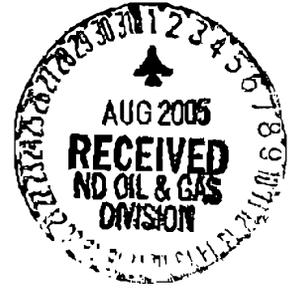
[Signature]  
Williams County Auditor

[Signature]  
Chairman Board of County Comm.

**AFFIDAVIT OF PLUGGING (HOLE PLUGGER)**

STATE OF NORTH DAKOTA )

COUNTY OF Ward )



Before me, Susan Gilstad, a Notary Public in and for the said County and State, this day personally appeared David Boho

who being first duly sworn, deposes and says that (s)he is employed by Dave Boho Drilling, 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.

David Boho  
Hole Plugger Representative

Subscribed in my presence and sworn before me this 28 day of July, 2005

Notary Public Susan Gilstad

My Commission Expires

**SUSAN J GILSTAD**  
Notary Public  
State of North Dakota  
My commission expires Sept 11, 2009

## SEISMIC HOLE PLUGGING REPORT

CLIENT COMPANY Solid States / Grant  
 HOLE PLUGGING CONTRACTOR Babe  
 PROSPECT McKenzie 2D

DATE \_\_\_\_\_  
 PERMIT NO. 99

LINE NO.	S.P. NO.	HOLE DEPTH	DRILL TYPE <small>Conventional Auger Dugger-Parsons</small>	WET/DRY	BENT SX.	BENT CAPSULES	CAPSULE SIZE <small>Diameter x Length</small>	PLUG DEPTH	REMARKS <small>How Grouted, Thick Mud, etc.</small>	
1	3	101.5	40	A	D	4	NA	NA	3'ft	
2		105.5	40	A	W	2	NA	NA	1.5ft	
3		109.5	40	A	D	3	NA	NA	3.5ft	
4		113.5	40	A	W	1	NA	NA	1.5ft	
5		117.5	40	A	D	4	NA	NA	3.5ft	
6		121.5	40	A	D	1	NA	NA	3.5ft	
7		125.5	40	A	D	3	NA	NA	3.5ft	
8		129.5	40	A	D	4	NA	NA	3.5ft	
9		133.5	40	A	D	4	NA	NA	3.5ft	
10		137.5	40	A	W	1	NA	NA	2.5ft	
11		141.5	40	A	D	3	NA	NA	3.5ft	
12		145.5	40	A	D	3	NA	NA	3.5ft	
13		149.5	40	A	D	3	NA	NA	3.5ft	
14		153.5	40	A	D	4	NA	NA	3.5ft	
15										40 Bags Bentonite
16										14 Holes
17										14 Hole Plugs
18										
19										
20										
21		14				40				

Signature David Babe  
(Client)

Project Manager \_\_\_\_\_

NORTH DAKOTA INDUSTRIAL COMMISSION

OIL AND GAS DIVISION

Lynn D. Helms  
DIRECTOR

www.oilgas.nd.gov

Bruce E. Hicks  
ASSISTANT DIRECTOR

*March 8, 2005*  
February 25, 2005

The Honorable Beth Innis  
Williams County Auditor  
P.O. Box 2047  
Williston, ND 58802

RE: Geophysical Exploration  
Permit # 97-0099

Dear Ms. Innis:

Pursuant to Section 38-08.1-04.2 of the North Dakota Century Code, please be advised that Grant Geophysical Corporation was issued the above captioned permit on February 24, 2005 and will remain in effect for a period of one year.

Please be advised that this permit was initially approved for the McKenzie County portion of the program. After further review it was found that another line was actually located in Williams County.

Should you have any questions, please contact our office.

Sincerely,

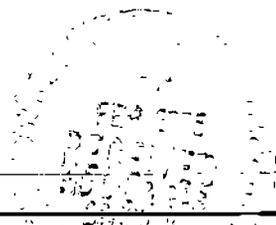
David C. Hvinden  
Geophysical Regulation Supervisor

DCH/dh



# GEOPHYSICAL EXPLORATION PERMIT

INDUSTRIAL COMMISSION OF NORTH DAKOTA  
 OIL AND GAS DIVISION  
 600 EAST BOULEVARD DEPT 405  
 BISMARCK, ND 58505-0840  
 SFN 51459 (03-2003)



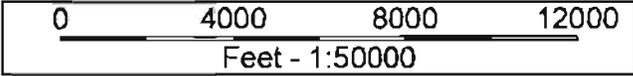
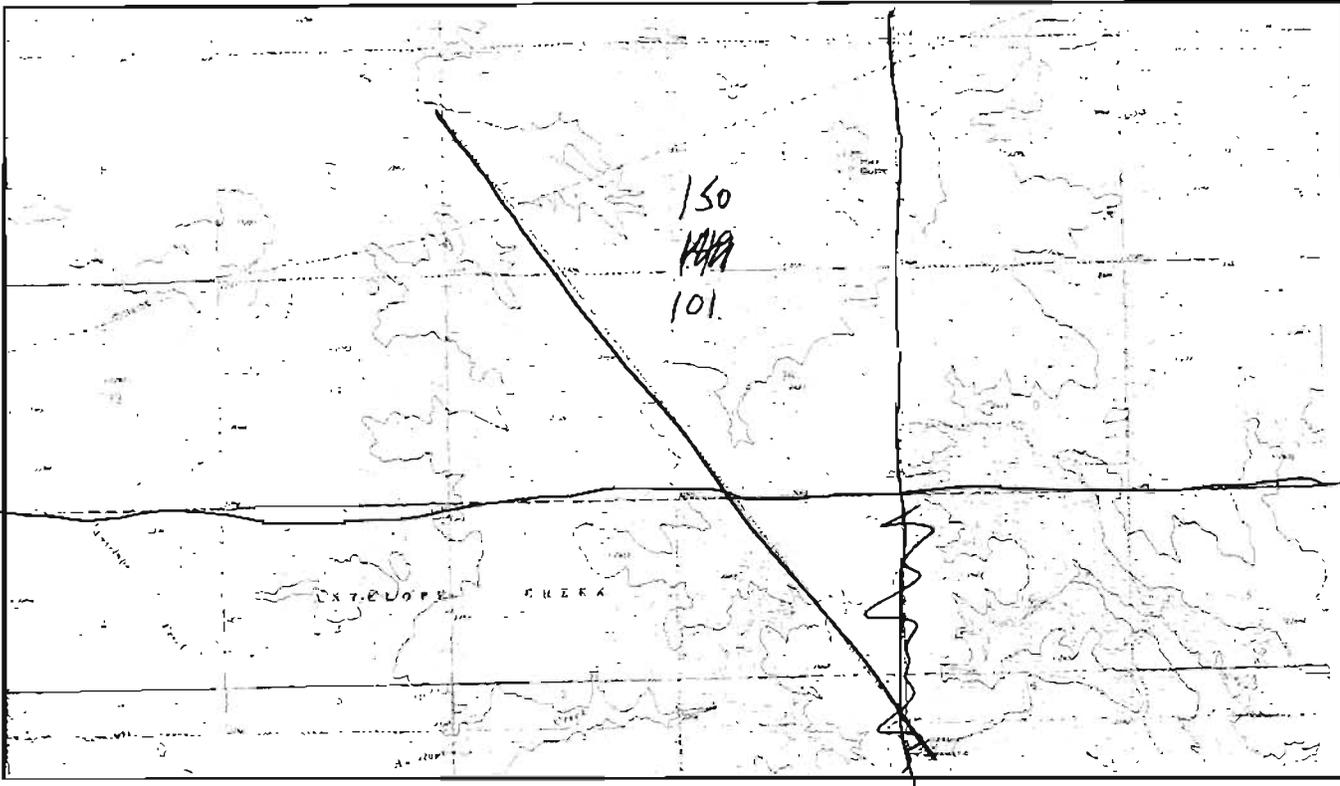
1) a. Company <b>Grant Geophysical Corp.</b>		Address <b>7309 Flint Rd. S.E. Calgary, Alberta Canada</b> <i>7211 163</i>	
Contact <b>Trent Middleton</b>		Telephone <b>(403) 255-9388</b>	Fax <b>(403) 255-4697</b>
Surety Company <b>RLI Insurance Co.</b>		Bond Amount <b>\$50,000.00</b>	Bond Number <b>RLB 00002817</b>
2) a. Subcontractor(s) <b>ECS Surveys</b>		Address <b>Sidney Montana</b>	
b. Subcontractor(s) <i>Dave Bohe</i>		Address <i>715 4<sup>th</sup> St. S.E. 58701</i> <i>Mount ND</i>	
c. Subcontractor(s) <i>Summit Drilling &amp; Holeplugging</i>		Address <i>HC 52, Box 2018 59226</i> <i>Froid, MT</i>	
3) Party Manager <b>Doyle Thurman</b>		Address <b>Denver, Colorado</b>	
4) Project Name or Line Numbers <b>Indian Hill 2D / Lines 1b,2 and 3</b>			
5) Exploration Method (Shot Hole, Non-Explosive, 2D, 3D) <b>Shot Hole</b>			
6) Approximate Drilling Start Date <b>February 21, 2005</b>		Approximate Completion Date <b>March 3, 2005</b>	

THE COMMISSION MUST BE NOTIFIED AT LEAST 24 HOURS IN ADVANCE OF COMMENCEMENT OF DRILL/PLUG OPERATIONS

7) Location of Proposed Project / County <b>McKenzie County</b> <i>Williams</i> <i>Sec 1</i> <i>149 N</i> <i>101 W</i>							
Section(s), Township(s) & Range(s)		Sec.	T.	R.			
		<b>7,8,9,12</b>	<b>153N</b>	<b>102W</b>			
		<b>12</b>	<b>153N</b>	<b>103W</b>			
		<b>21,22,23,</b>	<b>153N</b>	<b>101W</b>			
		<b>26,35,36</b>	<b>150N</b>	<b>101W</b>			
8) Size of Hole	Amt of Charge	Depth	Shots per Mi. (sq.mi.)	No. of Mi. (sq.mi.)	Identifying Marks Used on Nonmetallic Plug		
<b>5"</b>	<b>5lbs</b>	<b>40'</b>	<b>12</b>	<b>10.08</b>	Geophysical ID	a. Plugger ID	b. Plugger ID
9) Anticipated special drilling and plugging procedures? <b>McKenzie County</b>							
10) Enclose a pre-plot map with proposed location of seismic program lines and powder mag. <b>McKenzie County</b>							
Signed <i>Trent Middleton</i>		Title <b>Operations Supervisor</b>			Date <b>February 16, 2005</b>		
(This space for State office use)					Conditions of Approval If any		
Permit No. <b>970099</b>		Approval Date <b>2-24-2005</b>			<i>see attached letters</i> <i>Walt G. Hoch</i>		
Approved by <i>Walt G. Hoch</i>							
Title <i>Geophysical Regulation Supervisor</i>							
County Approval Sent <i>McKenzie</i>							

# McKenzie County 2Ds. Line 3

## Design Map and Summary



Line3\_RI110\_revised.osd

**Receivers Line Summary:**

Line_#	Tot	Total Mi	Max_Dst feet
103	162	3.354	110.00
	162	3.354	110.00

Average Bearing of Lines = 142.57 degrees

**Shots Line Summary:**

Line_#	Tot	Total Mi	Max_Dst feet
103	41	3.333	440.00
	41	3.333	440.00

Average Bearing of Lines = 142.57 degrees

**Obstacle Summary:**

**Detour Summary:**

**Design Information provided:**

Max 40Hz. - desired 50Hz.

Negligible dip

Min depth: 1.6 to 1.7 sec. (2500 ft)

Target: structure at 1.9 sec (11500 ft) to 2.2 sec.

Max. Depth 13600 ft.

**Design Parameters:**

RI: 110 feet. ( 220 feet may be acceptable, but reduces lateral resolution )

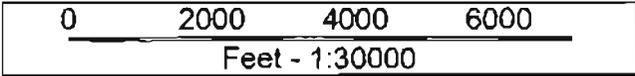
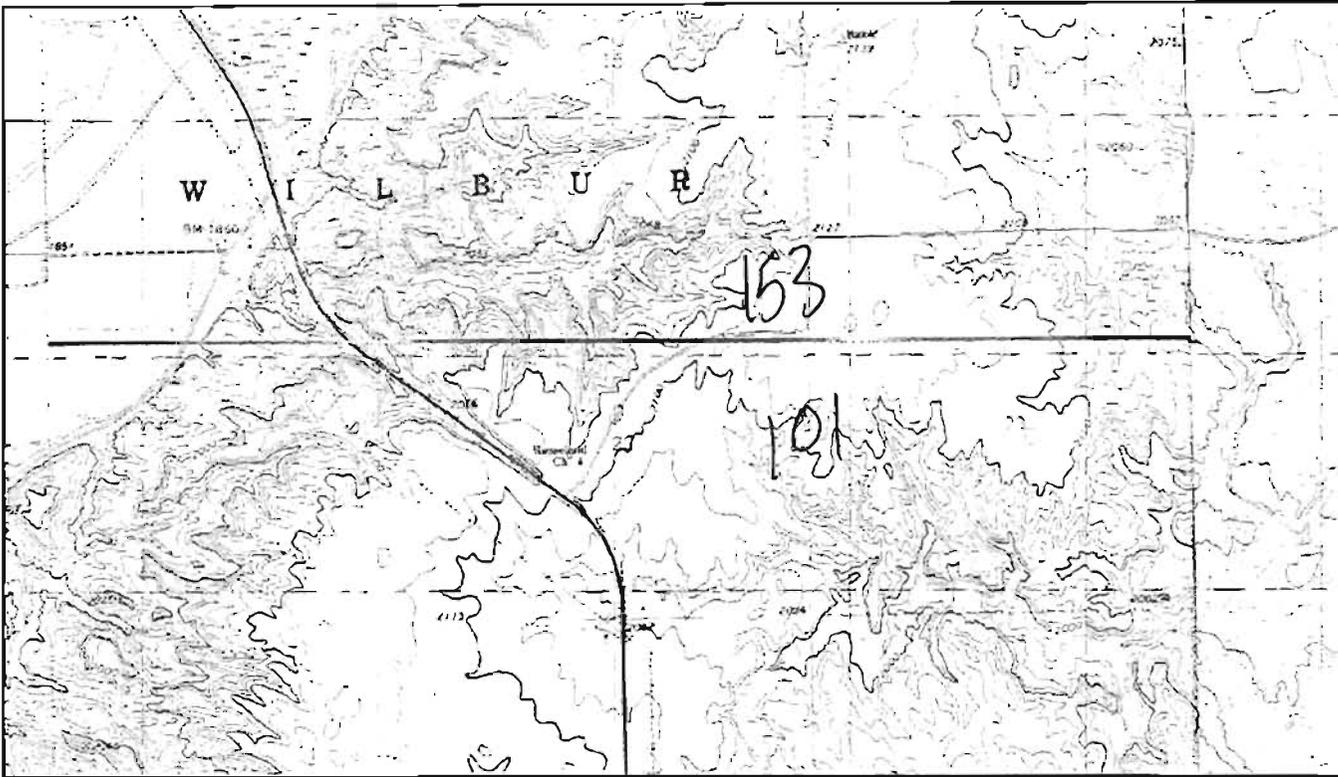
SI: 440 feet. ( 220 feet if more fold is required )

Spread: 248 channels. Nominal Fold: 31

Revision Jan 20/05: Move NW endpoint 1500 feet south.

# McKenzie County 2Ds. Line 2

## Design Map and Summary



Line2\_RI110.osd

Receivers Line Summary:

Line_#	Tot	Total Mi	Max_Dst Feet
102	145	3.000	110.00
-----			
	145	3.000	110.00

Average Bearing of Lines = 89.94 degrees

Shots Line Summary:

Line_#	Tot	Total Mi	Max_Dst Feet
102	37	3.000	440.00
-----			
	37	3.000	440.00

Average Bearing of Lines = 89.94 degrees

Obstacle Summary:

Detour Summary:

Design Information provided:

Max 40Hz. - desired 50Hz.  
 Negligible dip  
 Min depth: 1.6 to 1.7 sec. (2500 ft)  
 Target: structure at 1.9 sec (11500 ft) to 2.2 sec.  
 Max. Depth 13600 ft.

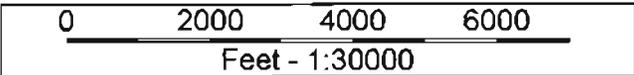
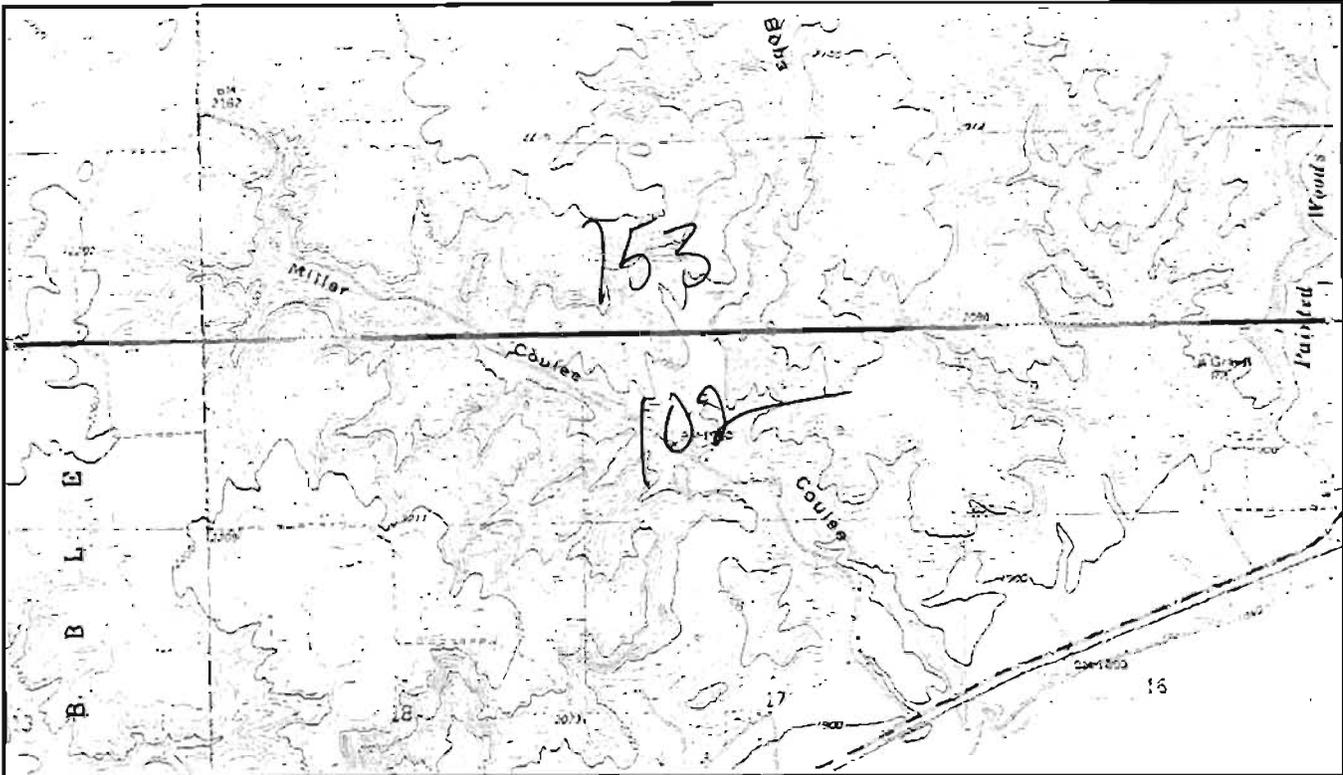
Design Parameters:

RI: 110 feet. ( 220 feet may be acceptable, but reduces lateral resolution )  
 SI: 440 feet. ( 220 feet if more fold is required )

Spread: 248 channels. Nominal Fold: 31

# McKenzie County 2Ds. Line 1b

## Design Map and Summary



Line1b\_R1110.osd

Receivers Line Summary:

Line #	Tot	Total Mi	Max_Dst Feet
102	168	3.479	110.00
-----			
	168	3.479	110.00

Average Bearing of Lines = 89.16 degrees

Shots Line Summary:

Line #	Tot	Total Mi	Max_Dst Feet
101	42	3.417	440.00
-----			
	42	3.417	440.00

Average Bearing of Lines = 89.16 degrees

Obstacle Summary:

Detour Summary:

Design Information provided:  
 Max 40Hz. - desired 50Hz.  
 Negligible dip  
 Min depth: 1.6 to 1.7 sec. (2500 ft)  
 Target: structure at 1.9 sec (11500 ft) to 2.2 sec.  
 Max. Depth 13600 ft.

Design Parameters:  
 RI: 110 feet. ( 220 feet may be acceptable, but reduces lateral resolution )  
 SI: 440 feet. ( 220 feet if more fold is required )

Spread: 248 channels. Nominal Fold: 31

NORTH DAKOTA INDUSTRIAL COMMISSION

OIL AND GAS DIVISION

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ASSISTANT DIRECTOR

Mr. Trent Middleton  
Solid State Geophysical dba Grant Geophysical Corp.  
7309 Flint Rd. S.E.  
Calgary, Alberta, Canada T2H 1G3

February 25, 2005

RE: Geophysical Exploration Permit # 97-0099  
Indian Hill 2-D/lines 1b,2,3  
McKenzie County, North Dakota

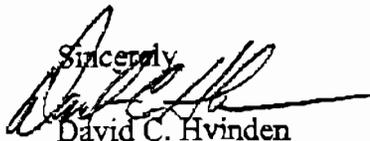
Dear Mr. Middleton:

Please be advised that we are in receipt of your Geophysical Exploration permit and have conditionally approved your permit effective for one year from February 24, 2005. Please review the following conditions for your permit:

1. A pre-program meeting with state seismic inspector Tom Torstenson may be required. You must contact him at 701-227-7436 (w) or 701-290-1546 (cell) at least 24 hours prior to any exploration operations.
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 post plot map 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.
4. If available, a SEG P1 with all source and receiver points should be made available to the Oil and Gas Division upon filing of the seismic completion report within 30 days of the completion of the program.

In an effort to improve surface owner awareness (see attached letter), we are requesting that you furnish copies of section 38-11.1 of the NDCC to any mineral developers with whom you contract so that they or their agents may distribute this notice to all surface owners located in, or within a one-half mile perimeter surrounding all seismic programs permitted in the future.

Should you have any questions regarding this matter, feel free to contact me at 701-328-8037, or Tom Torstenson at the number listed in paragraph 1.

Sincerely,  


David C. Hvinden  
Geophysical Regulation Supervisor

NORTH DAKOTA INDUSTRIAL COMMISSION

OIL AND GAS DIVISION

Lynn D. Helms  
DIRECTOR

www.oilgas.nd.gov

Bruce E. Hicks  
ASSISTANT DIRECTOR

February 25, 2005

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

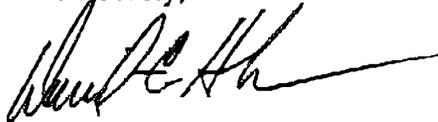
RE: Geophysical Exploration  
Permit # 97-0099

Dear Ms. Olson:

Pursuant to Section 38-08.1-04.2 of the North Dakota Century Code, please be advised that Grant Geophysical Corporation was issued the above captioned permit on February 24, 2005 and will remain in effect for a period of one year.

Should you have any questions, please contact our office.

Sincerely,



David C. Hvinden  
Geophysical Regulation Supervisor

DCH/dh