



**SUNDRY NOTICE**  
**INDUSTRIAL COMMISSION OF NORTH DAKOTA**  
**OIL AND GAS DIVISION**  
 SFN 51468 (11-97)



PERMIT # 97-0023  
 600 E BOULEVARD AVE  
 BISMARCK, ND 58506

Project Name: OTTERNESS 3-D CLIENT: LUFF

County: BOWMAN, ND

Supplemental Information:

BUCKSKIN SERVICES STARTED PLUGGING THE OTTERNESS PROSPECT ON APRIL 15, 1998 AND FINISHED PLUGGING ON APRIL 19, 1998. WE USED 1354 BAGS OF ENVIRO-PLUG ON 471 HOLES AVERAGING 2.8 BAGS PER HOLE. THERE WERE AREAS THAT WERE WET WHICH ALSO HAD ALKALIE. SO WE HAD TO DRILL FIFTEEN MINI HOLE PATTERNS WHICH CONSIST OF A FIVE FOOT HOLE WITH 1/3 LB. OF DYNAMITE IN EACH OF THE FIVE HOLES OVER A 110 FOOT INTERVAL. ALSO, THERE WERE SIXTEEN REDRILLS DUE TO RECORDER PROBLEMS. INCLUDED IS A LIST OF THE BLOWOUTS, MINI-HOLES AND REDRILLS. WE FINISHED SHOOTING ON APRIL 24, 1998 AND SINCE THE JOB WAS IN HARDING CO., SD AND BOWMAN CO., ND; WE CONTACTED MARK KEENIHAN WITH THE DEPT. OF ENVIRONMENT & NATURAL RESOURCES, STATE OF SD. HE CAME AND INSPECTED THE PERCENTAGE OF THE JOB THAT WAS IN SD. AND SAID EVERYTHING LOOKED EXCELLENT ON APRIL 27, 1998.

Company: BUCKSKIN SERVICES

Address:

City: State: Zip Code:

By: Date:

Title: Telephone Number:

**FOR OFFICE USE ONLY**

Date Received: 5/19/98  
 By: [Signature]  
 Title: Regional Regulator Supervisor

PERMIT NUMBER: 97-0023

**AFFIDAVIT OF PLUGGING (HOLE PLUGGER)**



STATE OF NORTH DAKOTA )

COUNTY OF Bowman )

Before me, John M. Oberfeld, a Notary Public in and for the said County and State, this day personally appeared Jayce E. Day who being first duly sworn, deposes and says that (s)he is employed by Puckston Services, 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.

Jayce E. Day  
Hole Plugger Representative

Subscribed in my presence and sworn before me this 13<sup>th</sup> day of May, 98.

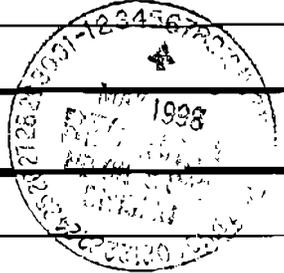
Notary Public: John M. Oberfeld

My Commission Expires 6-26-99



PERMIT NO.: 97-0023

SHOT HOLE OPERATIONS: 60ft 5// \*NON-EXPLOSIVE OPERATIONS:



**SECTION 1**

GEOPHYSICAL CONTRACTOR: RELIABLE EXPLORATION, INC.

PROJECT NAME AND NUMBER: LUFF- Otterness 3-D Prospect COUNTY(S): Bowman County, ND

TOWNSHIP(S): T 129 N RANGE(S): R 102 W

DRILLING & PLUGGING CONTRACTORS:

DATE COMMENCED: 4/15/98 DATE COMPLETED: 4/23/98

**SECTION 2**

FIRST S.P. #: 502 total holes LAST S.P. #:

LOADED HOLES (UNDETONATED SHOT POINTS)

S.P. #'s:														
CHARGE SIZE::														
DEPTH:														

REASONS HOLES WERE NOT SHOT: NONE

**SECTION 3**

FLOWING HOLES AND/OR BLOWOUTS:  
 S.P.#'s SEE ATTACHED

PROCEDURE FOR PLUGGING FLOWING HOLES: AND/OR BLOWOUTS:  
 TO STATE SPECS.

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.



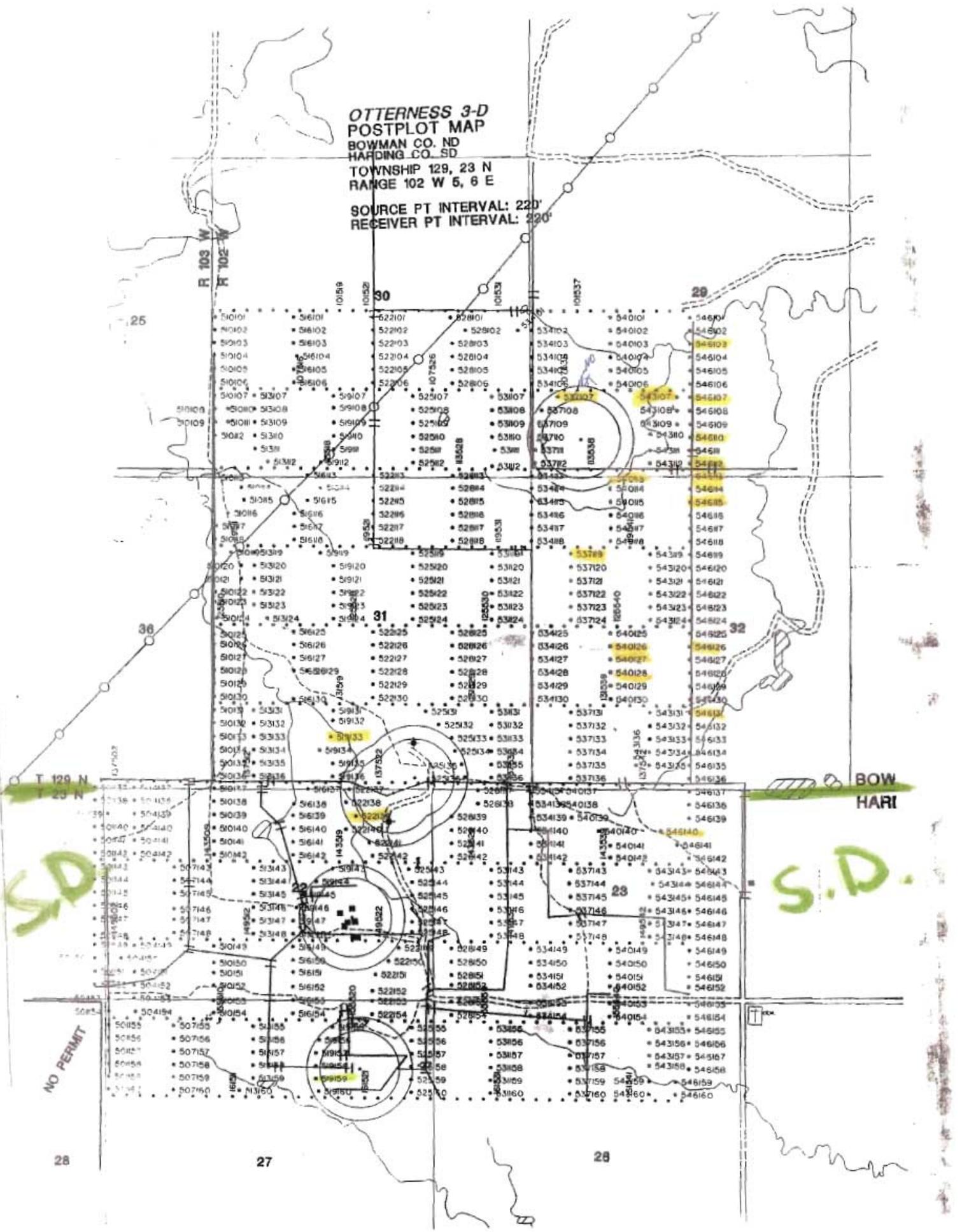
**OTTERNESS 3-D  
POSTPLOT MAP**

BOWMAN CO. ND  
HARDING CO. SD

TOWNSHIP 129, 23 N  
RANGE 102 W 5, 6 E

SOURCE PT INTERVAL: 220'

RECEIVER PT INTERVAL: 220'



SD

S.D.

NO PERMIT

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BOW  
HARI

**OTTERNESS 3-D - RELIABLE EXPLORATION, INC.  
LUFF EXPLORATION  
BOWMAN CO., ND / HARDING CO., SD  
INSTRUMENT PROBLEMS/JOB SUMMARY**

DATE	SOURCE PT	PROBLEM ENCOUNTERED / SUMMARY DESCRIPTION
21-Apr	546135	SLAVE # 2 - NO START; RECEIVER LINES 101, 107, 113, 119, 125 & 131.
	546123	SLAVE # 2 - NO START; RECEIVER LINES 101, 107, 113, 119, 125 & 131.
	528103	MASTER; SHOT IS RECORDED ON DAILY TAPE, DID NOT WRITE TO DATABASE.
	537143	MASTER - NO DATA, COMPUTER LOCKED UP; LINES 137, 143, 149, 155 & 161.
	528104	MASTER - NO DATA, COMPUTER LOCKED UP; LINES 137, 143, 149, 155 & 161.
	537144	MASTER - NO DATA, COMPUTER LOCKED UP; LINES 137, 143, 149, 155 & 161.
	528105	MASTER - NO DATA, COMPUTER LOCKED UP; LINES 137, 143, 149, 155 & 161.
	537145	MASTER - NO DATA, COMPUTER LOCKED UP; LINES 137, 143, 149, 155 & 161.
	528106	MASTER - NO DATA, COMPUTER LOCKED UP; LINES 137, 143, 149, 155 & 161.
	537146	MASTER - NO DATA, COMPUTER LOCKED UP; LINES 137, 143, 149, 155 & 161.
4/22/98	525107	MASTER - NO DATA, COMPUTER LOCKED UP; LINES 137, 143, 149, 155 & 161.
	546153	SLAVE # 2 - CABLE DISCONNECTED; STA'S 101528-545 & 107516-521 DEAD ON SHOT.
	540149	MASTER - NO DATA, COMPUTER LOCKED UP; LINES 137, 143, 149, 155 & 161.
	510122	MASTER - NO DATA, COMPUTER LOCKED UP; LINES 137, 143, 149, 155 & 161.
4/23/98	519123	SLAVE # 2 - NO START; RECEIVER LINES 101, 107, 113, 119, 125 & 131.
	519159	SLAVE # 2 - NO START; RECEIVER LINES 101, 107, 113, 119, 125 & 131.
	534126	SLAVE # 2 - NO START; RECEIVER LINES 101, 107, 113, 119, 125 & 131.
4/24/98	525134	MASTER - NO START; RECEIVER LINES 137, 143, 149, 155 & 161.
	537144	MASTER - NO START; RECEIVER LINES 137, 143, 149, 155 & 161. REDRILL.

**JOB SUMMARY - PRODUCTION REPORT**

4/19/98		STARTED LAYING OUT ON OTTERNESS 3-D.
4/20/98		LAYING OUT & TROUBLESHOOTING; FINISHED DRILLING MINI-HOLE PATTERNS.
4/21/98		FINISHED LAYOUT & TROUBLESHOOTING; <b>RECORDED 114 SHOTS</b> . WILL REDRILL SHOTS MISSED BY RECORDERS ON 4/23/98.
4/22/98		<b>RECORDED 193 SHOTS.</b>
4/23/98		<b>RECORDED 180 SHOTS.</b>
4/24/98		<b>RECORDED 15 SHOTS</b> (REDRILLS). COMPLETED SHOOTING OTTERNESS 3-D, STARTED PICKING UP.
4/25/98		PICKING UP EQUIPMENT.
4/26/98		FINISHED PICKING UP ON OTTERNESS 3-D.

**BLOWOUTS**

4/21/98	546131	7.5 BAGS OF BENTONITE / HOLE PLUG @ 3'.	
	546126	8 BAGS OF BENTONITE / NO PLUG.	
	546140	2 BAGS OF BENTONITE / HOLE PLUG @ 3'.	
	546115	12.5 BAGS OF BENTONITE / HOLE PLUG @ 3'.	
	546114	3 BAGS OF BENTONITE / HOLE PLUG @ 3'.	
4/22/98	546113	5 BAGS OF BENTONITE / HOLE PLUG @ 3'.	
	546112	7 BAGS OF BENTONITE / HOLE PLUG @ 3'.	
	546110	15.5 BAGS OF BENTONITE / HOLE PLUG @ 3'.	
	546107	7 BAGS OF BENTONITE / HOLE PLUG @ 3'.	
	546103	13 BAGS OF BENTONITE / HOLE PLUG @ 3'.	
	543107	2 BAGS OF BENTONITE / HOLE PLUG @ 3'.	
	540113	6 BAGS OF BENTONITE / HOLE PLUG @ 3'.	
	537119	2 BAGS OF BENTONITE / HOLE PLUG @ 3'.	
	4/23/98	519133	2.5 BAGS OF BENTONITE / HOLE PLUG @ 3'.

SOUTH DAKOTA

OTTERNESS 3-D

	<b>540128</b>	16 BAGS OF BENTONITE / HOLE PLUG @ 3'	
	<b>540127</b>	2 BAGS OF BENTONITE / HOLE PLUG @ 3'	
	<b>540126</b>	3 BAGS OF BENTONITE / HOLE PLUG @ 3'	
	<b>522139</b>	3 BAGS OF BENTONITE / HOLE PLUG @ 3'	SOUTH DAKOTA
<b>4/24/98</b>	<b>519159</b>	3 BAGS OF BENTONITE / HOLE PLUG @ 3'	SOUTH DAKOTA

**REDRILLS**

<b>4/23/98</b>	<b>546135</b>	2.5 BAGS OF BENTONITE / HOLE PLUG @ 3'
	<b>546123</b>	4 BAGS OF BENTONITE / HOLE PLUG @ 3'
	<b>537143</b>	2 BAGS OF BENTONITE / HOLE PLUG @ 3'
	<b>528104</b>	3 BAGS OF BENTONITE / HOLE PLUG @ 3'
	<b>537144</b>	2 BAGS OF BENTONITE / HOLE PLUG @ 3'
	<b>528105</b>	2 BAGS OF BENTONITE / HOLE PLUG @ 3'
	<b>537145</b>	2 BAGS OF BENTONITE / HOLE PLUG @ 3'
	<b>528106</b>	4 BAGS OF BENTONITE / HOLE PLUG @ 3'
	<b>537146</b>	2 BAGS OF BENTONITE / HOLE PLUG @ 3'
	<b>525107</b>	2 BAGS OF BENTONITE / HOLE PLUG @ 3'
	<b>540149</b>	2 BAGS OF BENTONITE / HOLE PLUG @ 3'
	<b>519123</b>	5 BAGS OF BENTONITE / HOLE PLUG @ 3'
	<b>510122</b>	MINI-HOLE; REDRILLED ON 4/22/98.
	<b>519159</b>	1 BAGS OF BENTONITE, HOLE BRIDGED OFF / HOLE PLUG @ 3'
	<b>534126</b>	4.5 BAGS OF BENTONITE / HOLE PLUG @ 3'
	<b>525134</b>	6 BAGS OF BENTONITE / HOLE PLUG @ 3'

**MINI-HOLES**

<b>4/20/98</b>	<b>510122</b>	5 HOLES EACH WITH 1/3 LB. @ 5'. TOTAL OF 1 2/3 LB. PER PATTERN.
	<b>510123</b>	5 HOLES EACH WITH 1/3 LB. @ 5'. TOTAL OF 1 2/3 LB. PER PATTERN.
	<b>510124</b>	5 HOLES EACH WITH 1/3 LB. @ 5'. TOTAL OF 1 2/3 LB. PER PATTERN.
	<b>510125</b>	5 HOLES EACH WITH 1/3 LB. @ 5'. TOTAL OF 1 2/3 LB. PER PATTERN.
	<b>510126</b>	5 HOLES EACH WITH 1/3 LB. @ 5'. TOTAL OF 1 2/3 LB. PER PATTERN.
	<b>543155</b>	5 HOLES EACH WITH 1/3 LB. @ 5'. TOTAL OF 1 2/3 LB. PER PATTERN.
	<b>543156</b>	5 HOLES EACH WITH 1/3 LB. @ 5'. TOTAL OF 1 2/3 LB. PER PATTERN.
	<b>543157</b>	5 HOLES EACH WITH 1/3 LB. @ 5'. TOTAL OF 1 2/3 LB. PER PATTERN.
	<b>543158</b>	5 HOLES EACH WITH 1/3 LB. @ 5'. TOTAL OF 1 2/3 LB. PER PATTERN.
	<b>543159</b>	5 HOLES EACH WITH 1/3 LB. @ 5'. TOTAL OF 1 2/3 LB. PER PATTERN.
	<b>543160</b>	5 HOLES EACH WITH 1/3 LB. @ 5'. TOTAL OF 1 2/3 LB. PER PATTERN.
	<b>546153</b>	5 HOLES EACH WITH 1/3 LB. @ 5'. TOTAL OF 1 2/3 LB. PER PATTERN.
	<b>546154</b>	5 HOLES EACH WITH 1/3 LB. @ 5'. TOTAL OF 1 2/3 LB. PER PATTERN.
	<b>546159</b>	5 HOLES EACH WITH 1/3 LB. @ 5'. TOTAL OF 1 2/3 LB. PER PATTERN.
	<b>546160</b>	5 HOLES EACH WITH 1/3 LB. @ 5'. TOTAL OF 1 2/3 LB. PER PATTERN.

**TOTAL HOLES SHOT - 502 HOLES (486 WITH 16 REDRILLS)**

RELIABLE EXPLORATION, INC 868 Parkway Lane Billings, MT 59101  
 a. Company - Address

Allen Rein, President (406) 259-1860 FAX (406) 259-8589  
 Contact, Telephone, Fax

Amwest Surety Co \$50,000.00 1140460  
 Surety Company Bond Amount Bond Number

Swenson Drilling Box 693 Sidney, MT 59270  
 1. Subcontractor(s), Address, Telephone

TCS Drilling Box 574 Sidney, MT 59270  
 b. Subcontractor(s), Address, Telephone

Buckskin Services (Holcplugger) 919 - 12th St SW Sidney, MT 59270  
 c. Subcontractor(s), Address, Telephone

Douglas Wick (406) 482-4092 P.O. Box 741 Sidney, MT 59270  
 Party Manager, Address, Telephone

OTTERNESS 3-D PROSPECT  
 Project Name or Line Numbers

Shot Hole 3D  
 Exploration Method (Shot Hole, Non-Explosive, 2D, 3D)

Approx. Date Work Will Start \_\_\_\_\_ Approx. Date Work Completion \_\_\_\_\_

**MUST NOTIFY THE COMMISSION AT LEAST 24 HOURS IN ADVANCE OF COMMENCEMENT OF DRILL/PLUG OPERATIONS**

Location of Proposed Project

County(s) Bowman County, ND

Section(s), Township(s) & Range(s)	Sec.	T	R
	<u>29, 30, 31, 32</u>	<u>129 N</u>	<u>102 W</u>
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____

Size of Hole	Amount of Charge	Depth	Shots <del>(per hole)</del>	Number of Miles (sq.mi.)	Identifying Marks Used on Non-metallic Plug			
					Geophysical ID	a. Plugger ID	b. Plugger ID	c. Plugger ID
<u>4 3/4</u>	<u>5#</u>	<u>60'</u>	<u>486 SPS</u>	<u>4.25 sq</u>	<u>REL</u>			<u>REL</u>

a. Proposed hole drilling and plugging procedure.

b) Enclose a Map with proposed line \_\_\_\_\_

ICED Allen Rein TITLE President DATE 11/10/97

This space for State office use)

CONDITIONS OF APPROVAL IF ANY:

PERMIT NO. 97-0023 DATE 11/2/97  
 APPROVAL DATE 11/2/97 ORIGINAL SIGNED BY DAVID G. [Signature]  
 APPROVED BY \_\_\_\_\_  
 Geophysical Regulator  
 Approvals sent Bowman County 11/2/97

*proper notification prior to commencement of drilling operations*  
[Signature] 11/2/97

T129N-R103W

Scotts Copy

T129N-R102W

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ND

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SD

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23N/5E

LUFF EXPLORATION COMPANY

OTTERNESS 3-D SURVEY

BOWMAN CO. N.D. &

HARDING CO. S.D.

1320' SHOT LINE  
1320' RCVR LINE  
220' GROUP INT  
220' SHOT INT

TOTAL SHOTS = 486  
TOTAL RCVRS = 441

60' HOLES w/ 5lbs.

NORTH DAKOTA INDUSTRIAL COMMISSION

**OIL AND GAS DIVISION**

Westley D. Norton  
DIRECTOR

F.E. Wilborn  
ASSISTANT DIRECTOR

November 12 ,1997

Allen Rein  
Reliable Exploration, Inc.  
868 Parkway Lane  
Billings, MT 59101

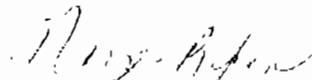
**RE: GEOPHYSICAL EXPLORATION PERMIT NO. 97-0023  
OTTERNESS 3-D PROSPECT**

Dear Mr. Rein:

This letter will verify the approval of the above-captioned Geophysical Permit effective November 12, 1997.

Please feel free to contact Mr. David Hvinden, Geophysical Regulation Supervisor if you should have any questions.

Sincerely,



Marge Rixen  
Legal Assistant

/mr

NORTH DAKOTA INDUSTRIAL COMMISSION

OIL AND GAS DIVISION

Wesley D. Norton  
DIRECTOR

F.E. Wilborn  
ASSISTANT DIRECTOR

November 12, 1997

The Honorable Rory Teigen  
Bowman County Sheriff  
P.O. Box 439  
Bowman, ND 58623

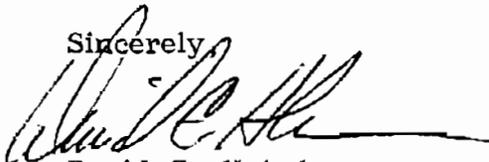
RE: Geophysical Exploration  
Permit #97-0023

Dear Sheriff Teigen:

Pursuant to Section 38-08.1-04.2 of the North Dakota Century Code, please be advised that Reliable Exploration Inc. was issued the above captioned permit on November 12, 1997 and will remain in effect for a period of one year.

Should you have any question, please contact our office.

Sincerely,



David C. Hvinden  
Geophysical Regulation Supervisor

DCH/dh