

9170020

103 102



157

157

Prospect: Lonesome Dove 3D Survey  
Design: B1 - Area 1 (Post Plot)  
Client: Legacy Energy Corporation  
Area: Williams County, North Dakota

Recording Patch:  
10 Lines of 120 Channels

Detector Point Spacing: 220 ft  
Detector Line Spacing: 880 ft

Source Point Spacing: 220 ft  
Source Line Spacing: 2640 ft

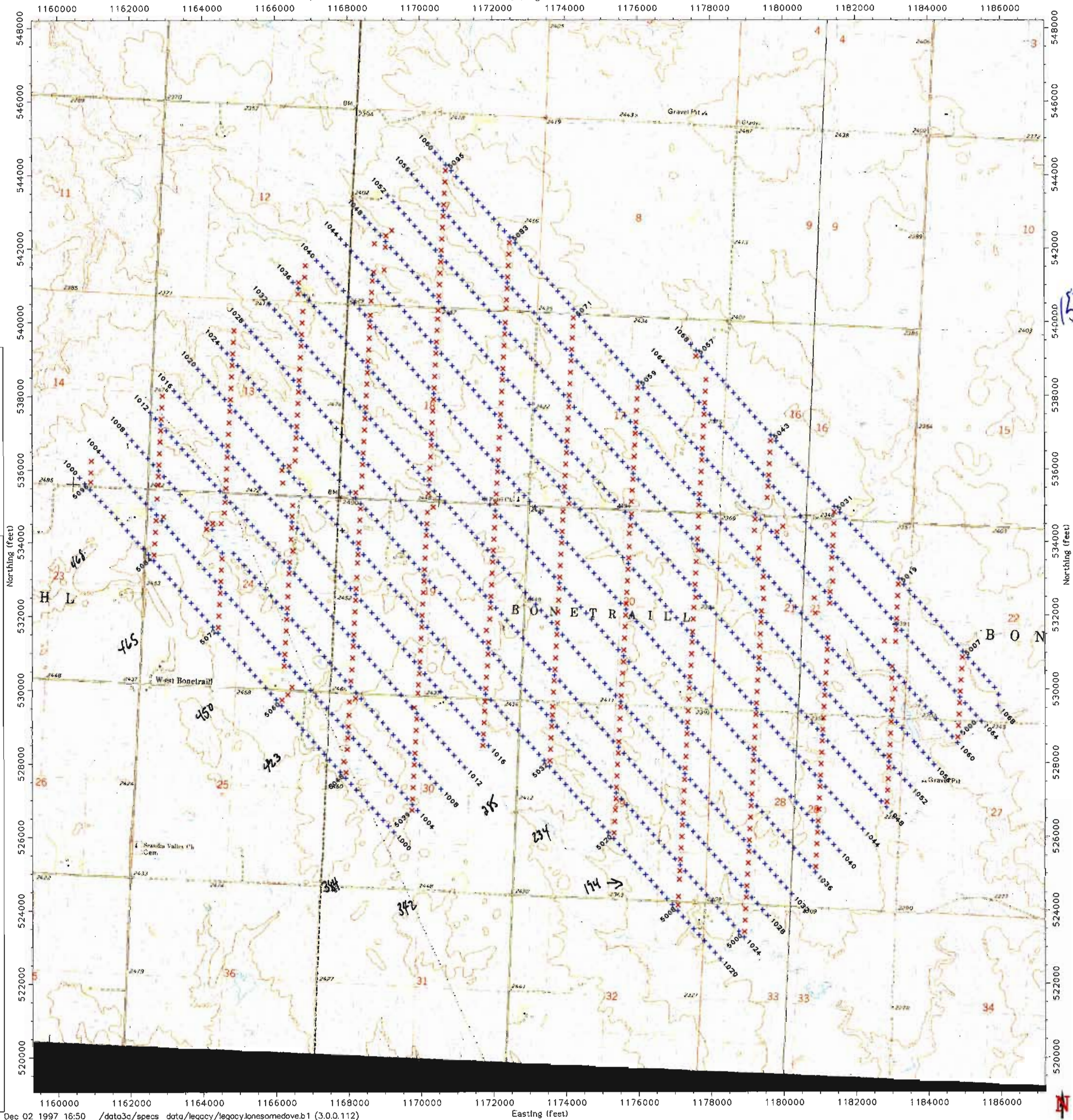
Cell Size:  
110.0 x 110.0 ft

X Source  
+ Detector

Map Scale: 1:24000



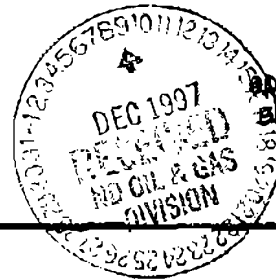
Western Geophysical







**SEISMIC COMPLETION REPORT**  
 INDUSTRIAL COMMISSION OF NORTH DAKOTA  
 OIL AND GAS DIVISION  
 S: N 51456 (11-97)



800 E BOULEVARD AVE  
 BISMARCK, ND 58506

PERMIT NO. 97-0020

SHOT HOLE OPERATIONS: \*NON-EXPLOSIVE OPERATIONS. Vibroseis

**SECTION 1**

GEOPHYSICAL CONTRACTOR: Western Geophysical Co.

PROJECT NAME AND NUMBER: Lonesome Dove 3D COUNTY(S): Williams

TOWNSHIP(S): T157N RANGE(S): R102W & R103W

PERMITTED BY: Bob Scoeppe & John Morley

DATE COMMENCED: 11/12/97 DATE COMPLETED: 11/30/97

**SECTION 2**

FIRST S.P. #: N/A LAST S.P. #:

LOADED HOLES (UNDETONATED SHOT POINTS)

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

REASONS HOLES WERE NOT SHOT:

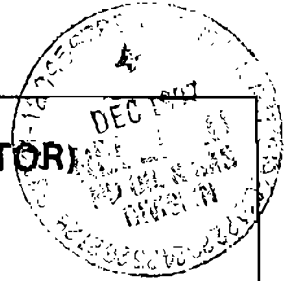
**SECTION 3**

FLOWING HOLES S.P.#'s N/A

PROCEDURE FOR PLUGGING FLOWING HOLES:

Include a 7.5 minute USGS topographic quadrangle map or a computer generated post-plot facsimile of the approximate scale displaying each individual hole, its CP #, tie #, and legal location.

\*Non-Explosive Operations - Complete Section 1 and Affidavit



**AFFIDAVIT OF COMPLETION (GEOPHYSICAL CONTRACTOR)**

STATE OF WYOMING )  
 )  
COUNTY OF Campbell )

Before me, Deborah A. Kipp, a Notary Public in and for the said County and State, this day personally appeared John Morley who being first duly sworn, deposes and says that (s)he is employed by Western Geophysical Co., 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.

John E. Morley John Morley  
Geophysical Contractor Representative

Subscribed in my presence and sworn before me this 4<sup>th</sup> day of December, 1997.

Notary Public Deborah A. Kipp

My Commission Expires 6-26-99

DEBORAH A. KIPP  
Notary Public  
Campbell County, WY  
My Commission Expires  
June 26, 1999

NORTH DAKOTA INDUSTRIAL COMMISSION

**OIL AND GAS DIVISION**

Wesley D. Norton  
DIRECTOR

F.F. Wilborn  
ASSISTANT DIRECTOR

November 12, 1997

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

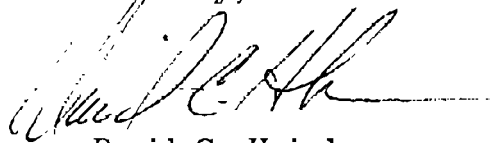
**RE: Geophysical Exploration  
Permit #97-0020**

Dear Ms. Innis:

Pursuant to Section 38-08.1-04.2 of the North Dakota Century Code, please be advised that Western Geophysical Company was issued the above captioned permit on November 6, 1997 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/th

*Beth, when I receive a suitable map outlining  
the project area, it will forward to you with  
the original permit*

*Thanks*  




Western Geophysical

Western Atlas International  
370 17th Street, Suite 1800  
Denver, Colorado  
80202-5618

Tel 303-629-9250  
Fax 303-595-0497

Western United States

**FAX MESSAGE**

**ATTENTION:** Dave Hynden (701)328-8020

**COMPANY:** Industrial Commission (701)328-8022 Fax #

**FROM:** Bob Schoeppe (701)774-0241

**DATE:** November 6, 1997 (701)774 0318 Fax #

**NUMBER OF PAGES (Including cover sheet)** 4

**IF YOU HAVE ANY QUESTIONS, PLEASE CALL (303) 629-9250 EXT. 438**

Dave,

Enclosed are the signed permit along with a county map. I called the office in Wyoming and the check is being typed now & will arrive in Williston this weekend. I'll mail it to you as soon as I receive it. I'll hard copy mail this permit to you along with the map. Fax me back a signed copy as soon as possible. Nice visiting with you, Let me know if there is any thing else I can do. Thanks!

*Bob Schoeppe*





NORTH DAKOTA INDUSTRIAL COMMISSION

**OIL AND GAS DIVISION**

Wesley D. Norton  
DIRECTOR

F.E. Wilborn  
ASSISTANT DIRECTOR

November 6, 1997

Mr. Bob Schoeppe  
Western Geophysical, Inc.  
% Airport International Inn  
3601 2nd Ave. West  
Williston, ND 58801

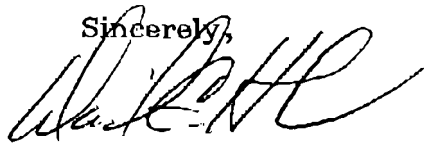
RE: Geophysical Exploration  
Regulations

Dear Mr. Schoeppe:

As per our telephone conversation of this afternoon, please find enclosed a copy of our tentative rules and regulations regarding geophysical exploration in North Dakota.

Also enclosed are permit and completion forms for your use on subsequent programs.

Sincerely,



David C. Hvinden  
Geophysical Regulations Supervisor

DCH/dh

Enclosures

1) a. Company Western Geophysical Company		Address 370 17th Street Suite 1800 Denver, Colorado 80202-5618	
Contact Bob Schoeppe or John Morley		Telephone (701)774-0241	Fax (701)774-0318
Surety Company American Home Assurance Company		Bond Amount \$ 50,000.00*	Bond Number 18-18-11
2) a. Subcontractor(s) N/A		Address	Telephone
b. Subcontractor(s)		Address	Telephone
c. Subcontractor(s)		Address	Telephone
3) Party Manager		Address	Telephone
4) Project Name or Line Numbers Lonesome Dove 3D			
5) Exploration Method (Shot hole, Non-Explosive, 2D, 3D) Vibroseis operation			
6) Approx. Date Work Will Start November 12, 1997		Approx. Date Work Completion one hundred & twenty days (120)	
<b>PLEASE NOTIFY THE COMMISSION AT LEAST 24 HOURS IN ADVANCE OF COMMENCEMENT OF DRILL/PLUG OPERATIONS</b>			
7) Location of Proposed Project - County Williams County, N.D. (25 miles NW of Williston, N.D. - see attached plat)			
Section(s), Township(s) & Range(s)		Sec. 6, 7, 8, 16, 17, 18, 19, 20, 21, 22, 27, 28, 29, 30, 32	T157N R102W
		Sec. 21, 22, 27, 28, 29, 30, 32	R 33 T157N R102W
		Sec. 1, 2, 3, 10, 11, 12, 13, 14,	T157N R103W
		Sec. 23, 24 & 25.	T157N R103W
		35 & 36	T157N R103W
8) Size of Hole	Amount of Charge	Depth	Shots Per Mile (sq.-mi.)
N/A	N/A	N/A	N/A
			Number of Miles (sq.-mi.)
			N/A
<b>Identifying Marks Used on Vespacellite Plug</b>			
		Geophysical ID	Plugging ID
9) Anticipated special drilling and plugging procedures? Vibroseis operation			
10) Enclose a pre-plot map with proposed location of seismic program lines and powder bag. County map attached showing area of interest.			
Signed <i>Bob Schoeppe</i> Bob Schoeppe		Title Permit Agent	Date November 12, 1997
(This space for State office use)		Conditions of Approval if any!	
Permit No. 97-0030		Approval Date 11-6-97	
Approved By <i>David C. Hill</i>		approved pending receipt of hard copy permit app, fee and pre-plot map.  <i>11/6/97</i>	
Title Geophysical Regulation Supervisor			
County Approval Seal Williams County			

\*See Instructions on Reverse Side



NORTH DAKOTA INDUSTRIAL COMMISSION

**OIL AND GAS DIVISION**

Wesley D. Norton  
DIRECTOR

F.E. Wilborn  
ASSISTANT DIRECTOR

November 14 ,1997

Western Geophysical Company  
ATTN: BOB SCHOEPPE  
370-17th St., Ste. 1800  
Denver, Co 80202-5618

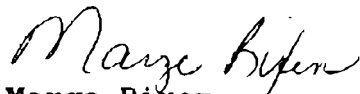
**RE: GEOPHYSICAL EXPLORATION PERMIT NO. 97-0020  
LONESOME DOVE 3D - WILLIAMS CO.**

Dear Mr. Schoeppe:

This letter will verify the approval of the above-captioned Geophysical Permit effective November 6, 1997.

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

Sincerely,



Marge Rixen  
Legal Assistant

/mr