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UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Farmington, NM

FORM APPROVED  
OMB No. 1004-0136  
Expires November 30, 2000

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		7. If Unit or CA Agreement, Name and No.
b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		8. Lease Name and Well No. <b>Nordhaus Federal #9</b>
2. Name of Operator <b>Great Western Drilling Company</b>		9. API Well No. <b>3003927591</b>
3A. Address <b>c/o Walsh Engineering, 7415 E. Main, Farmington, NM 87402</b>	3b. Phone No. (include area code) <b>(505) 327-4892</b>	10. Field and Pool, or Exploratory <b>Ballard Pictured Cliffs</b>
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface <b>660' FNL and 1995' FEL</b> At proposed prod. Zone		11. Sec., T., R., M., or Blk, and Survey or Area <b>B Sec. 19, T25N, R7W</b>
14. Distance in miles and direction from nearest town or post office* <b>25 miles southeast of Blanco, NM</b>		12. County or Parish <b>Rio Arriba</b>
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) <b>660'</b>		13. State <b>NM</b>
16. No. of Acres in lease <b>640 +</b>	17. Spacing Unit dedicated to this well <b>NE/4 160 acres</b>	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. <b>1250'</b>	19. Proposed Depth <b>2330 +/-</b>	20. BLM/BIA Bond No. on file
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>6491' GR</b>	22. Approximate date work will start* <b>April 1, 2004</b>	23. Estimated duration <b>1 week</b>

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- |   |   |
|---|---|
| 1. Well plat certified by a registered surveyor.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).   |
| 2. A Drilling Plan.   | 5. Operator certification.  |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized office. |

25. Signature <i>Paul C. Thompson</i>	Name (Printed/Typed) <b>Paul C. Thompson, P.E.</b>	Date <b>1/25/2004</b>
Title	<b>Agent</b>	
Approved by (Signature) <i>David J. Mandowicz</i>	Name (Printed/Typed)	Date <b>MAR 1 2004</b>
Title	Office	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on reverse)

**HOLD C104 FOR** *Change in status to Nordhaus WNFederal #5*

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".

NMOCDD

District I  
PO Box 1980, Hobbs, NM 88241-1980

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised February 21, 1994

District II  
PO Drawer D0, Artesia, NM 88211-0719

Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

District III  
1000 Rio Brazos Rd., Aztec, NM 87410

AMENDED REPORT

District IV  
PO Box 2088, Santa Fe, NM 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number <b>30-039-27591</b>		<sup>2</sup> Pool Code 71439	<sup>3</sup> Pool Name BALLARD PICTURED CLIFFS
<sup>4</sup> Property Code <b>33579</b>	<sup>5</sup> Property Name NORDHAUS FEDERAL		<sup>6</sup> Well Number 9
<sup>7</sup> GRID No. 9338	<sup>8</sup> Operator Name GREAT WESTERN DRILLING		<sup>9</sup> Elevation 6491'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	19	25N	7W		660	NORTH	1995	EAST	RIO ARRIBA

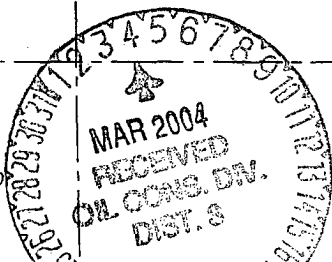
<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

<sup>12</sup> Dedicated Acres 160.0 Acres - (NE/4)	<sup>13</sup> Joint or Infill Y	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<p><sup>16</sup> 1325.28'      1328.58'      2657.82'</p> <p>LOT 1</p> <p>660'      1995'</p> <p>LAT: 36°23.4800' N LONG: 107°36.7072' W DATUM: NAD27</p> <p>5289.24'      5237.10'</p> <p>LOT 2</p> <p>LOT 3</p> <p>LOT 4</p> <p>1342.44'      1331.22'      2661.78'</p>	<p><sup>17</sup> OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <p><i>Paul C. Thompson</i> Signature</p> <p>PAUL C. THOMPSON Printed Name</p> <p>AGENT Title</p> <p>1/25/04 Date</p>
	<p><sup>18</sup> SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>Survey Date: DECEMBER 19, 2003</p> <p>Signature and Seal of Professional Surveyor</p>
	<p>JASON C. EDWARDS Certificate Number      15269</p>



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2004 JAN 27 AM 11:11  
070 Farmington, NM

GREAT WESTERN DRILLING CO.  
OPERATIONS PLAN  
Nordhaus Federal #9

I. Location: 660' FNL & 1995' FEL  
Sec 19 T25N R7W  
San Juan County, NM

Date: January 23, 2004

Field: Ballard Pictured Cliffs  
Surface: BLM  
Minerals: SF - 078477

Elev: GL 6491'

II. Geology: Surface formation \_ Nacimiento

<u>Formation Tops</u>	<u>Depths</u>
Ojo Alamo	1385'
Kirtland	1540'
Pictured Cliffs	2130'
Total Depth	2330'

Estimated depths of anticipated water, oil, gas, and other mineral bearing formations which are expected to be encountered:

Water and gas - 2130'.

B. Logging Program: Induction/GR and neutron/density logs at TD.

C. No over pressured zones are expected in this well. No H<sub>2</sub>S zones will be penetrated in this well. Max. BHP = 500 psig.

III. Drilling

A. Contractor:

B. Mud Program:

The surface hole will be drilled with a fresh water mud.

The production hole will be drilled with a fresh water polymer mud. The weighting material will be drill solids or if conditions dictate, barite. The maximum mud weight expected is 8.5 ppg.

C. Minimum Blowout Control Specifications:

Double ram type or annular type 2000 psi working pressure BOP with a rotating head. See the attached exhibits (#1 and #2) for details on the BOP equipment. All ram type preventers and related equipment will be hydraulically tested at nipple-up and after any use under pressure to 1000 psi.

C. Cont.

The blind rams will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All checks of the BOP stack and equipment will be noted on the daily drilling report. The BOP equipment will include a kelly cock, floor safety valve, and choke manifold all rated to 2000 psi.

#### IV. Materials

##### A. Casing Program:

Hole Size	Depth	Casing Size	Wt. & Grade
8-3/4"	120'	7"	20# K-55
6-1/4"	2365'	4-1/2"	10.5# K-55

##### B. Float Equipment:

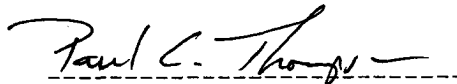
a) Surface Casing: None

b) Production Casing: 4-1/2" cement guide shoe and self fill insert float collar. Place float one joint above shoe. Five centralizers spaced every other joint above shoe and five turbolizers every other joint from the top of the well.

#### V. Cementing:

Surface casing: 7" - Use 30 sx (36 cu. ft.) of C1 "B" with 2% CaCl<sub>2</sub> (Yield = 1.18 cu. ft./sk; slurry weight = 15.6 PPG). 100% excess to circulate cement to surface. WOC 12 hours. Pressure test surface casing to 600 psi for 30 min.

Production Casing: 4-1/2" - Before cementing circulate hole with at least 1-1/2 hole volumes of mud. Precede cement with 30 bbls of fresh water. Lead with 175 sx (361 cu.ft) of C1 "B" with 2% SMS, 1/4#/sk. celloflake. (Yield = 2.06 cu.ft./sk; slurry weight = 12.5 PPG). Tail with 100 sx (118 cu.ft.) of C1 "B" with 2% CaCl<sub>2</sub>, and 1/4#/sk. celloflake/sk. (Yield = 1.18 cu. ft./sk; slurry weight = 15.6 PPG) Total cement volume is 479 cu.ft. (100% excess to circulate cement to surface).



Paul C. Thompson, P.E.