

Form 3160-3  
(April 2004)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

2007 MAR -2 AM 11:32

FORM APPROVED  
OMB No. 1004-0137  
Expires March 31, 2007

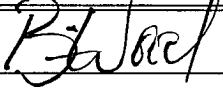
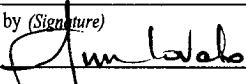
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		Lease Serial No. NMSF-078065
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator ELM RIDGE EXPLORATION COMPANY, LLC		7. If Unit or CA Agreement, Name and No. N/A
3a. Address P. O. BOX 156 BLOOMFIELD, NM 87413	3b. Phone No. (include area code) (505) 632-3476	8. Lease Name and Well No. RENATE HIXON 2
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 2070' FSL & 985' FEL At proposed prod. zone SAME		9. API Well No. 30-045-34207
14. Distance in miles and direction from nearest town or post office* 26 MILES SSE OF FARMINGTON, NM		10. Field and Pool, or Exploratory BISTI LOWER-GALLUP
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 750'	16. No. of acres in lease 440	11. Sec., T. R. M. or Blk. and Survey or Area I 21-25N-12W NMPM
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 859'	19. Proposed Depth 5,000'	12. County or Parish SAN JUAN
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,310' GL	22. Approximate date work will start* 04/20/2007	13. State NM
20. BLM/BIA Bond No. on file BLM STATE WIDE 886201C		17. Spacing Unit dedicated to this well N2SE4 (= 80 acres)
23. Estimated duration 3 WEEKS		

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 officer. |

25. Signature 	Name (Printed/Typed) BRIAN WOOD	Date 02/28/2007
Title CONSULTANT		
PHONE: (505) 466-8120 FAX: (505) 466-9682		
Approved by (Signature) 	Name (Printed/Typed)	Date 3/12/07
Title Acting AFM Minerals	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 page 2)

NOTIFY AZTEC OCD 24hrs  
IN TIME TO WITNESS cement & CS9

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

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

NMOCD

3/22/07

DISTRICT I  
1625 N. French Dr., Hobbs, N.M. 88240

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised August 15, 2000

DISTRICT II  
811 South First, Artesia, N.M. 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV  
2040 South Pacheco, Santa Fe, NM 87505

OIL CONSERVATION DIVISION

2040 South Pacheco  
Santa Fe, NM 87505

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

2007 MAR -2 AM 11:20 AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-045-34207	<sup>2</sup> Pool Code 5890	<sup>3</sup> Well Name BISTI LOWER - GALLUP
<sup>4</sup> Property Code 27240	<sup>5</sup> Property Name RENATE HIXON	<sup>6</sup> Well Number 2
<sup>7</sup> OGRID No. 149052	<sup>8</sup> Operator Name ELM RIDGE EXPLORATION, LLC	<sup>9</sup> Elevation 6310'

<sup>10</sup> Surface Location

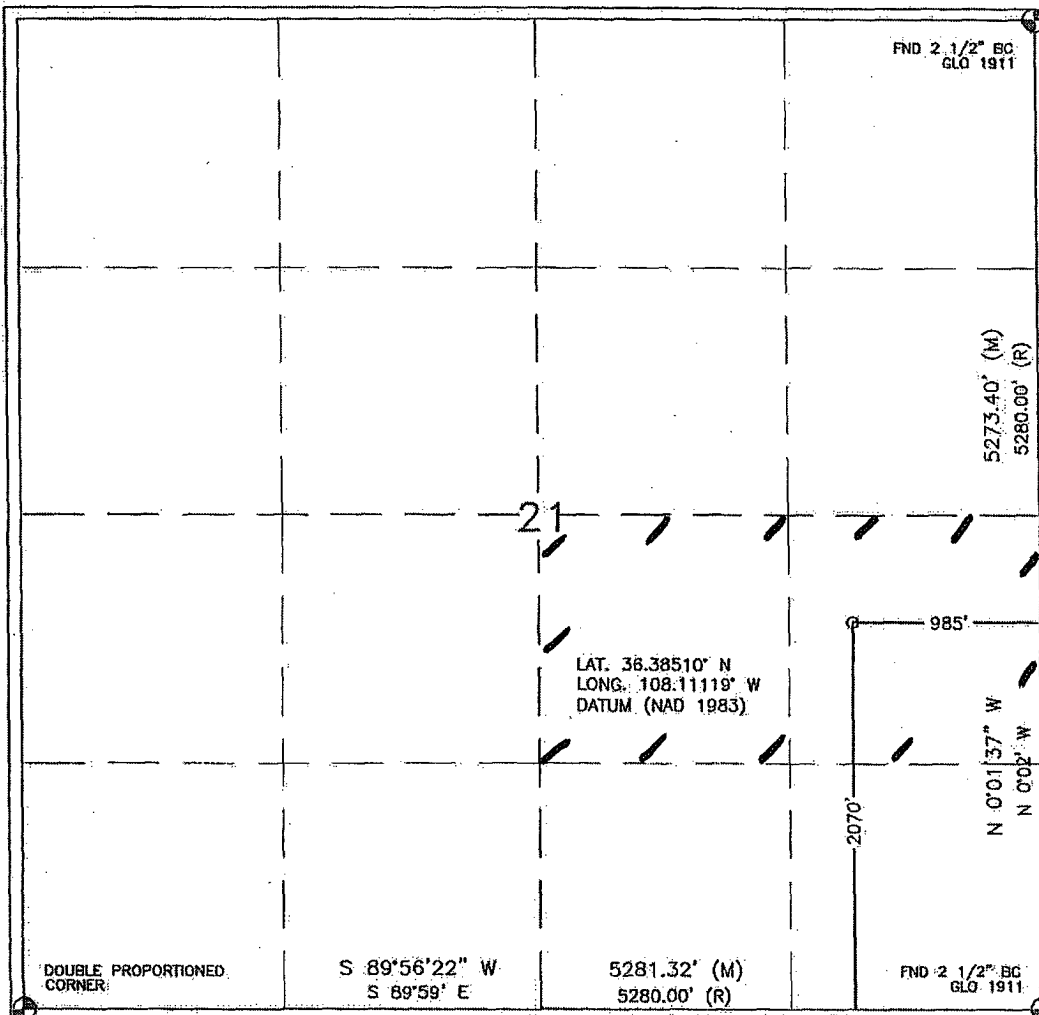
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	21	25N	12W		2070'	SOUTH	985'	EAST	SAN JUAN

<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 80		<sup>13</sup> Joint or Infill .		<sup>14</sup> Consolidation Code .		<sup>15</sup> Order No. RCVD MAR 16 '07 OIL CONS. DIV. DIST. 3			

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

16



17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

*Brian Wood*

Signature: BRIAN WOOD

Printed Name: CONSULTANT

Title: FEB. 28, 2007

Date:

18 SURVEYOR CERTIFICATION

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.

NOVEMBER 14, 2006

Date of Survey

Signature and Seal of Professional Surveyor

*David Russell*

DAVID RUSSELL

Certificate Number 10201

Submit 3 Copies To Appropriate District Office

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Ave., Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-103

May 27, 2004

WELL API NO.

30-045- **34207**

5. Indicate Type of Lease

STATE ☐ FEE ☐

6. ~~State~~ Oil & Gas Lease No.

NMSF-078065

7. Lease Name or Unit Agreement Name

RENATE HIXON 2

8. Well Number 2

9. OGRID Number 149052

10. Pool name or Wildcat

BISTI LOWER-GALLUP

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐

2. Name of Operator

ELM RIDGE EXPLORATION COMPANY, LLC

3. Address of Operator

P. O. BOX 156, BLOOMFIELD, NM 87413

4. Well Location

Unit Letter: I

2070' FSL & 985' FEL

Section 21

Township 25 North

Range 12 West

NMPM

SAN JUAN

County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

6,310' GL

Pit or Below-grade Tank Application ☒ or Closure ☐

Pit type: DRILLING Depth to Groundwater: >100' Distance from nearest fresh water well: >1,000' Distance from nearest surface water: >100'

Pit Liner Thickness:

12 mil

Below-Grade Tank: Volume

bbbs; Construction Material

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐

PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐

CHANGE PLANS ☐

PULL OR ALTER CASING ☐

MULTIPLE COMPL ☐

OTHER: DRILLING PIT

☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐

ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐

P AND A ☐

CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE

TITLE: CONSULTANT

DATE: FEB. 28, 2007

Type or print name: BRIAN WOOD

E-mail address: brian@permitswest.com

Telephone No.: (505) 466-8120

For State Use Only

APPROVED BY:

TITLE

DEPUTY OIL & GAS INSPECTOR, DIST. #4

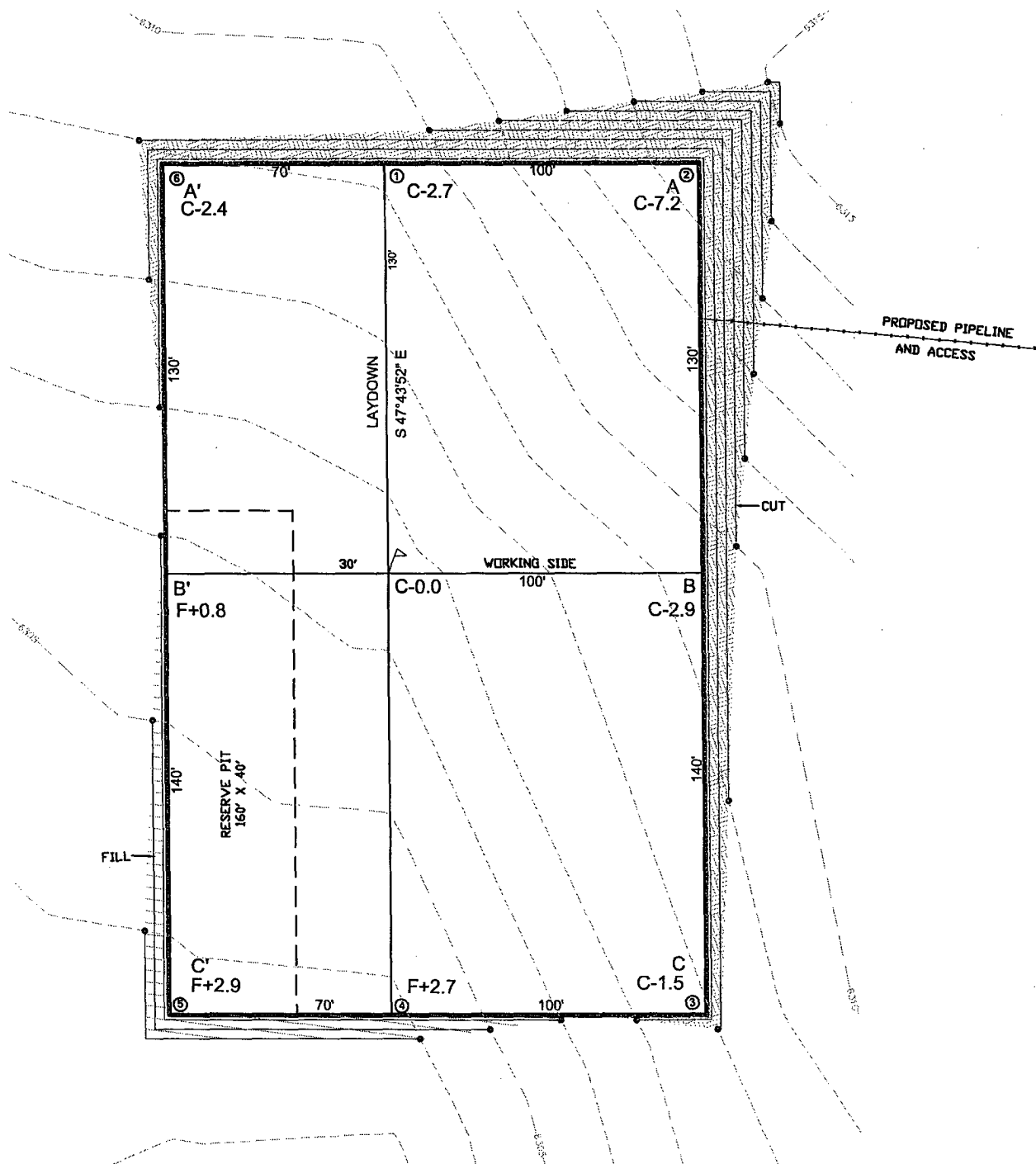
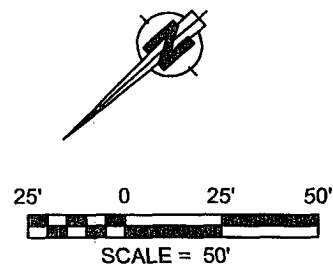
DATE

MAR 22 2007

Conditions of Approval (if any):

LATITUDE: 36.38510°N  
LONGITUDE: 108.11119°W  
DATUM: NAD 83

**ELM RIDGE EXPLORATION, LLC**  
RENATE HIXON #2  
2070' FSL & 985' FEL  
LOCATED IN THE NE/4 SE/4 OF  
SECTION 21, T25N, R12W, N.M.P.M.,  
SAN JUAN COUNTY, NEW MEXICO  
GROUND ELEVATION: 6310', NAVD 88  
FINISHED PAD ELEVATION: 6306.5', NAVD 88



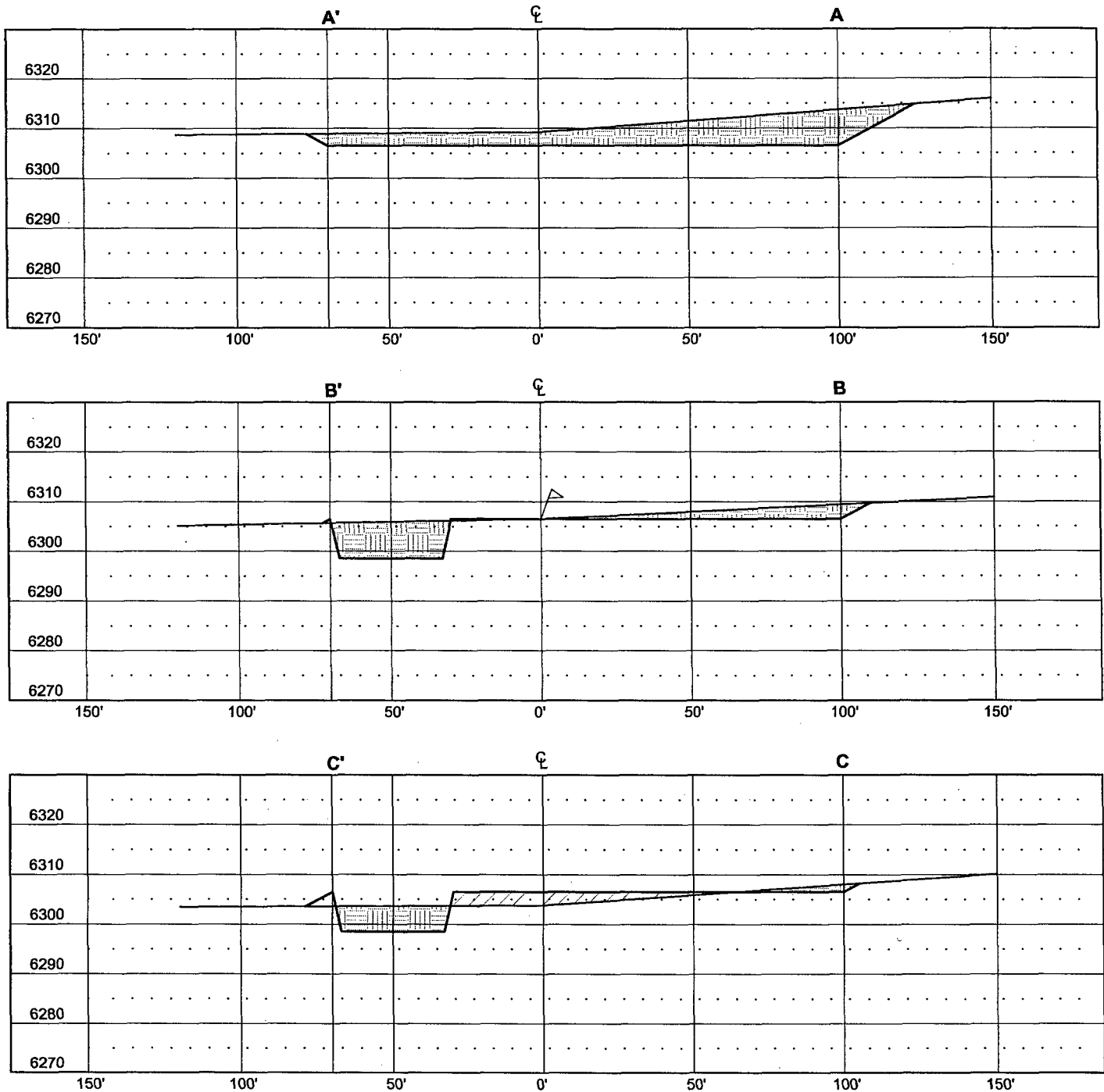
350 LF OF NEW ACCESS  
TO EXISTING DIRT ROAD

1 FOOT CONTOUR INTERVAL SHOWN  
SCALE: 1" = 50'  
JOB No.: ERE006  
DATE: 11/16/06; REV1

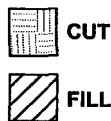


**Russell Surveying**  
1409 W. Aztec Blvd. #5  
Aztec, New Mexico 87410  
(505) 334-8637

**ELM RIDGE EXPLORATION, LLC**  
 RENATE HIXON #2  
 2070' FSL & 985' FEL  
 LOCATED IN THE NE/4 SE/4 OF  
 SECTION 21, T25N, R12W, N.M.P.M.,  
 SAN JUAN COUNTY, NEW MEXICO  
 GROUND ELEVATION: 6310', NAVD 88  
 FINISHED PAD ELEVATION: 6306.5', NAVD 88



VERT. SCALE: 1" = 30'  
 HORZ. SCALE: 1" = 50'  
 JOB No.: ERE006  
 DATE: 11/16/06; REV1



**Russell Surveying**  
 1409 W. Aztec Blvd. #5  
 Aztec, New Mexico 87410  
 (505) 334-8637



Elm Ridge Exploration Company, LLC  
Renate Hixon 2  
2070' FSL & 985' FEL  
Sec. 21, T. 25 N., R. 12 W.  
San Juan County, New Mexico

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## Drilling Program

### 1. ESTIMATED FORMATION TOPS

<u>Formation</u>	<u>GL Depth</u>	<u>KB Depth</u>	<u>Elevation</u>
Nacimient	0'	12'	+6,310'
Fruitland Coal	1,065'	1,077'	+5,245'
Pictured Cliffs	1,110'	1,122'	+5,200'
Lewis Shale	1,245'	1,257'	+5,065'
Cliff House	1,430'	1,442'	+4,880'
Menefee Shale	2,485'	2,497'	+3,825'
Point Lookout	3,540'	3,552'	+2,770'
Mancos Shale	3,695'	3,707'	+2,615'
Gallup Sandstone	4,615'	4,627'	+1,695'
Total Depth	5,000'	5,012'	+1,310'

### 2. NOTABLE ZONES

<u>Oil &amp;/or Gas Zones</u>	<u>Water Zones</u>	<u>Coal Zone</u>
Fruitland	Nacimient	Fruitland
Pictured Cliffs	Fruitland	
Gallup	Pictured Cliffs	

Water zones will be protected with casing, cement, and weighted mud. Fresh water encountered during drilling will be recorded by depth, cased, and cemented. Oil and gas shows will be tested for commercial potential based on the well site geologist's recommendations.

Elm Ridge Exploration Company, LLC  
Renate Hixon 2  
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### 3. PRESSURE CONTROL

The drilling contract has not yet been awarded. Thus the exact BOP model to be used is not yet known. A typical 2,000 psi model is on PAGE 3.

A  $\geq 2,000$  psi BOP and choke manifold system will be installed and tested to 2,000 psi before drilling surface casing plug. It will remain in use until the well is completed or abandoned. A safety valve and sub with a full opening valve to fit the drill pipe and collars will be available on the rig floor in the open position at all times for use when kelly is not in use.

All BOP mechanical and pressure tests will be recorded on the driller's log. BOPs will be inspected and opened and closed at least daily to assure good mechanical working order. Inspections will be recorded on the daily drilling report. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place.

### 4. CASING & CEMENT

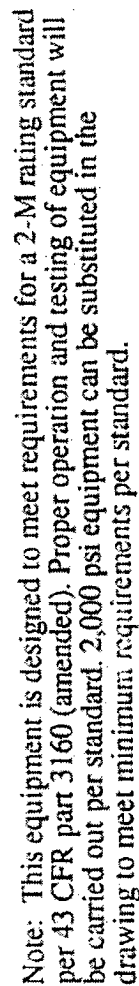
<u>Hole Size</u>	<u>O. D.</u>	<u>Pounds/Foot</u>	<u>Grade</u>	<u>Type</u>	<u>Age</u>	<u>Depth Set</u>
12-1/4"	8-5/8"	24	J-55 or K-55	S T & C	New	350'
7-7/8"	5-1/2"	10.5 <del>13.5</del>	J-55	L T & C	New	5,000'

Surface casing will be cemented to the surface with  $\approx 290$  cubic feet ( $\approx 245$  sacks) Class B with 1/4 pound per sack cellophane + 2%  $\text{CaCl}_2$ . Yield = 1.18 cubic feet per sack. Weight = 15.2 pounds per gallon. Volume = 100% excess. Centralizers will be installed on the middle of the shoe joint and every other centralizer thereafter.

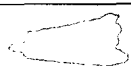
Production casing will be cemented to the surface in 2 stages with a stage tool set @  $\approx 3,500'$ . Centralizers will be installed on the middle of the shoe joint and on every joint thereafter ( $\approx 2$  dozen centralizers). Thread lock the guide shoe, bottom of float collar, and bottom of stage tool only. Use API casing dope.

**Note: 1.** An upper Kelly cock valve will be utilized during drilling. Handle will be available for easy access.

2. Safety valves and necessary subs to fit all drill string in use will be available.







Elm Ridge Exploration Company, LLC  
Renate Hixon 2  
2070' FSL & 985' FEL  
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First stage volume will be  $\approx 525$  cubic feet consisting of  $\approx 125$  sacks of Halliburton light with 65/35 poz mix + 1/4 pound per sack cellophane + 2%  $\text{CaCl}_2$  (yield = 1.87 cubic feet per sack, weight = 12.7 pounds per gallon) followed by  $\approx 250$  sacks Class B with 2%  $\text{CaCl}_2$  (yield = 1.18 cubic feet per sack, weight = 15.2 pounds per gallon). Volume = >100% excess, but caliper logs will be used to determine actual volume needed.

Second stage volume will be  $\approx 1,215$  cubic feet consisting of  $\approx 618$  sacks of Halliburton light with 65/35 poz mix + 1/4 pound per sack cellophane + 2%  $\text{CaCl}_2$  (yield = 1.87 cubic feet per sack, weight = 12.7 pounds per gallon) followed by  $\approx 50$  sacks of Class B with 2%  $\text{CaCl}_2$  (yield = 1.18 cubic feet per sack, weight = 15.2 pounds per gallon). Volume = >100% excess, but caliper logs will be used to determine actual volume needed.

#### 5. MUD PROGRAM

<u>Depth</u>	<u>Type</u>	<u>ppg</u>	<u>Viscosity</u>	<u>Fluid Loss</u>	<u>pH</u>
0' - 350'	Fresh water gel chem	9.0	50	NC	9
350' - TD	Fresh water gel chem	9.0	38 - 50	6.0	9

Enough material to maintain mud properties, control lost circulation, and contain a blowout will be at the well site while drilling. Mud will be checked hourly by rig personnel. Material to soak up possible oil or fuel spills will be on site.

#### 6. CORES, TESTS, & LOGS

No cores or drill stem tests are planned. DIL/GR logs will be run from TD to surface. CNL/FDC logs may be run over selected segments. Samples will be collected every  $\approx 10'$  through the Gallup. Samples will be collected every  $\approx 30'$  elsewhere.

Elm Ridge Exploration Company, LLC  
Renate Hixon 2  
2070' FSL & 985' FEL  
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San Juan County, New Mexico

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7. DOWN HOLE CONDITIONS

No abnormal pressures, temperatures, or hydrogen sulfide are expected. Maximum expected bottom hole pressure will be  $\leq 2,150$  psi.

8. OTHER INFORMATION

The anticipated spud date is April 20, 2007. It is expected it will take 1 week to drill and 2 weeks to complete the well.