

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMSF-078067
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. CARSON NMNM-78385A
3a. Address P. O. BOX 156 BLOOMFIELD, NM 87413		8. Lease Name and Well No. S. CARSON F20223 #11
3b. Phone No. (include area code) (505) 632-3476		9. API Well No. 30-045-34244
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 790' FNL & 790' FWL At proposed prod. zone SAME		10. Field and Pool, or Exploratory BISTI LOWER-GALLUP
14. Distance in miles and direction from nearest town or post office* 25 MILES SSE OF FARMINGTON, NM		11. Sec., T. R. M. or Blk. and Survey or Area 23-25N-12W NMPM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 530'	16. No. of acres in lease 1,680	17. Spacing Unit dedicated to this well N2 C(10) NW4 (=40 acres) 80AC
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1,843'	19. Proposed Depth 5,000'	20. BLM/BIA Bond No. on file BLM STATE WIDE 886201C NM2858
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,398' GL	22. Approximate date work will start* 05/10/2007	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.
2. A Drilling Plan.
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be required by the authorized officer.

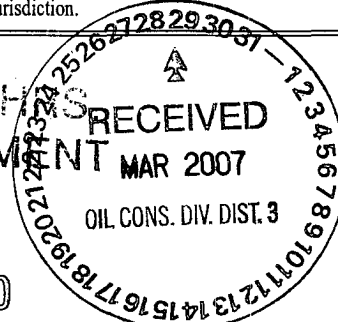
25. Signature 	Name (Printed/Typed) BRIAN WOOD	Date 03/09/2007
Title CONSULTANT		
PHONE: (505) 466-8120 FAX: (505) 466-9682		
Approved by (Signature) 	Name (Printed/Typed)	Date 3/27/07
Title AFFO	Office FFO	

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 24 HRS
PRIOR TO CASING & CEMENT



NWOCOD

3/30/07

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 15 AMENDED REPORT
1:26

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-34244	² Pool Code 5890	³ Pool Name BISTI LOWER - GALLUP
⁴ Property Code 36419	⁵ Property Name 36420 South CARSON Federal 23	⁶ Well Number 11
⁷ GRID No. 149052	⁸ Operator Name ELM RIDGE EXPLORATION, LLC	⁹ Elevation 6398'

¹⁰ Surface Location

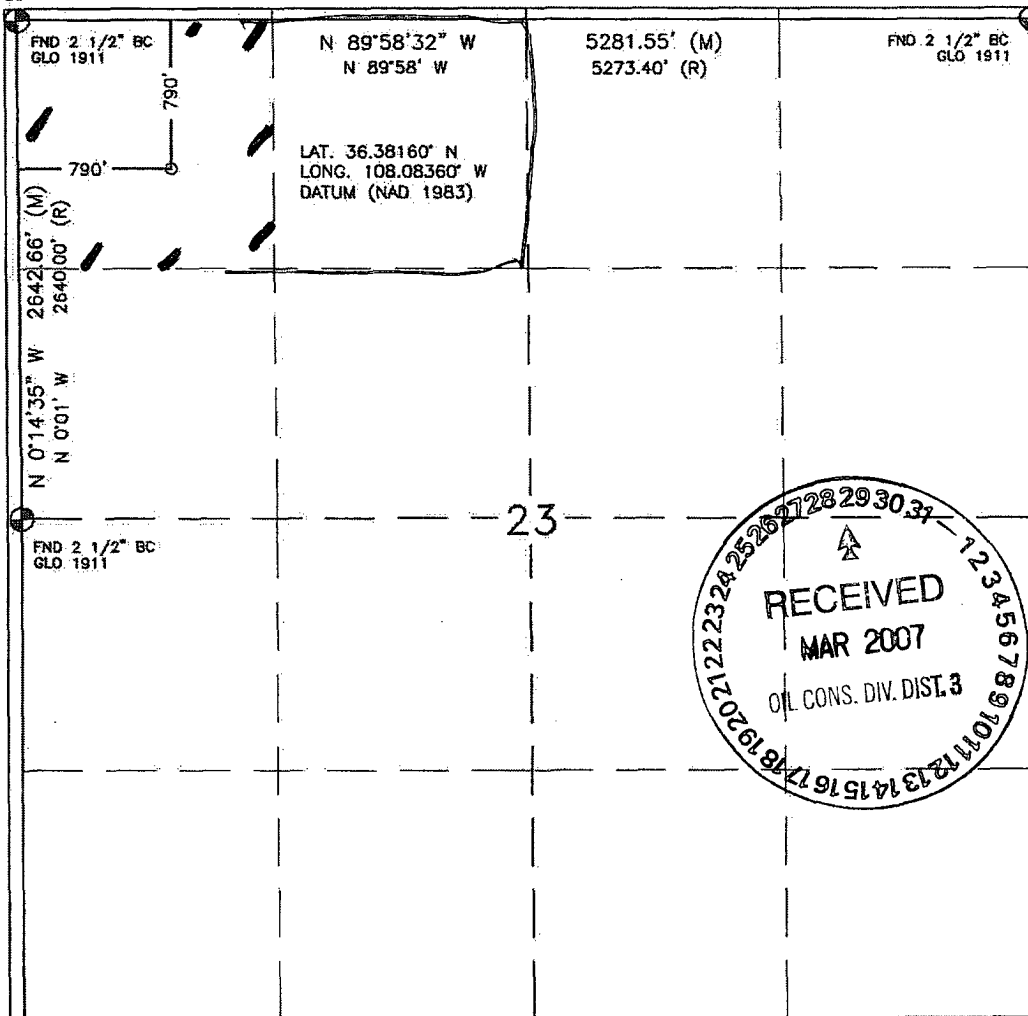
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	23	25N	12W		790'	NORTH	790'	WEST	SAN JUAN

¹¹ 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
¹² Dedicated Acres 80 40			¹³ Joint or Infill .		¹⁴ Consolidation Code .		¹⁵ Order No.		

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

Signature Brian Wood
Printed Name **BRIAN WOOD**
Title **CONSULTANT**
Date **MAR. 9, 2007**

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.

Date of Survey **OCTOBER 12, 2006**
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

Form C-103
May 27, 2004

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

WELL API NO.
30-045- **34244**

5. Indicate Type of Lease
STATE ☐ FEE ☐

6. ~~State~~ Oil & Gas Lease No.
NMSF-078067

7. Lease Name or Unit Agreement Name

CARSON UNIT 23

8. Well Number 11

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: D

790' FNL & 790' FWL

Section 23

Township 25 North

Range 12 West

NMPM

SAN JUAN

County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
6,398' 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: >500'

Pit Liner Thickness: 12 mil Below-Grade Tank: Volume bbls; 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 NMOC guidelines ☒, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE

TITLE: CONSULTANT

DATE: MAR. 9, 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

SENIOR OIL & GAS INSPECTOR, DIST. 4

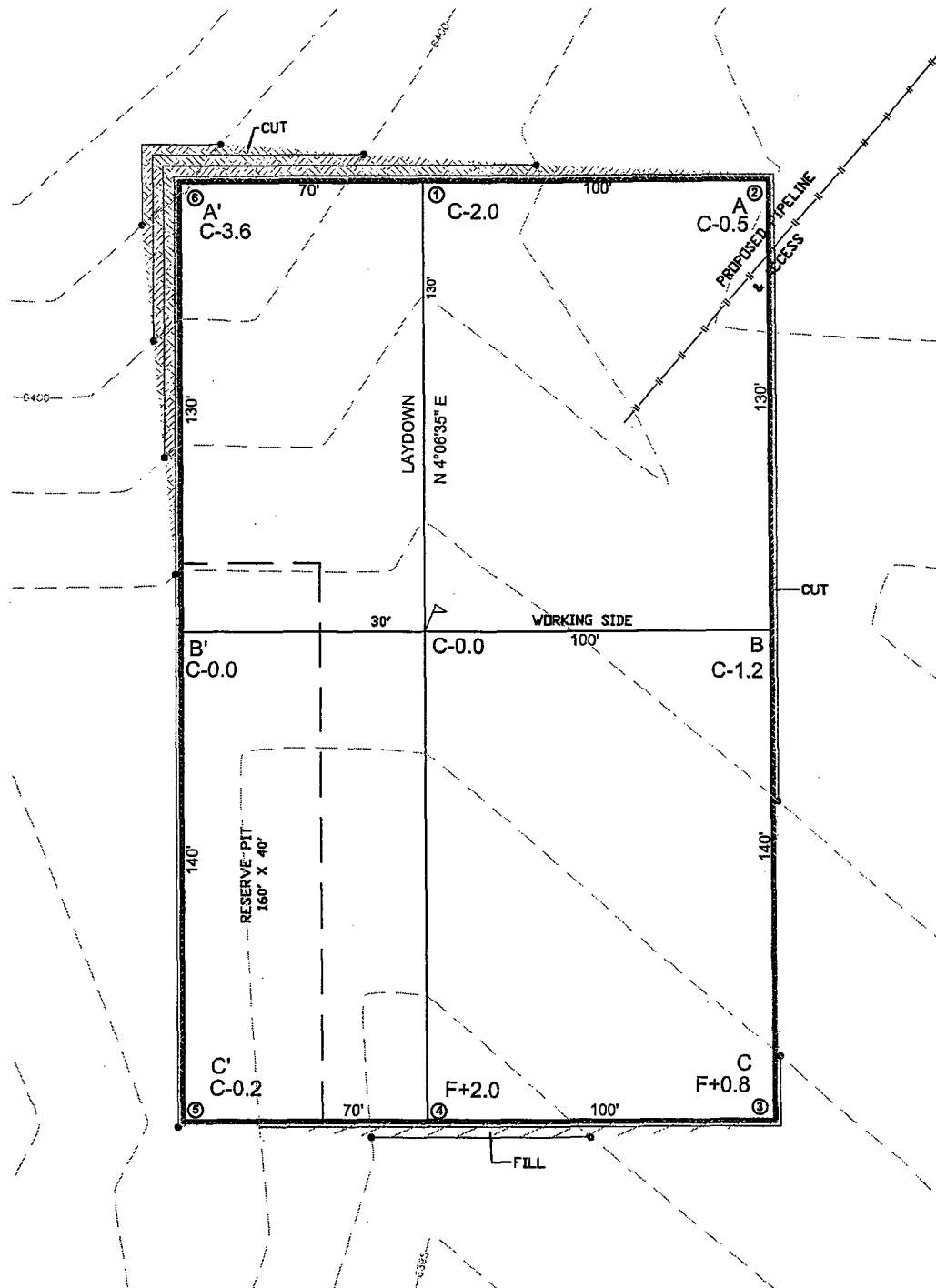
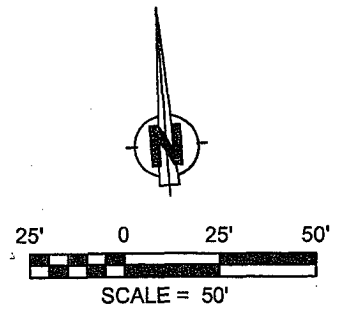
DATE

MAR 30 2007

Conditions of Approval (if any):

LATITUDE: 36.38160°N
LONGITUDE: 108.08360°W
DATUM: NAD 83

ELM RIDGE EXPLORATION, LLC
CARSON UNIT 23 #11
790' FNL & 790' FWL
LOCATED IN THE NW/4 NW/4 OF
SECTION 23, T25N, R12W, N.M.P.M.,
SAN JUAN COUNTY, NEW MEXICO
GROUND ELEVATION: 6398', NAVD 88
FINISHED PAD ELEVATION: 6397.5', NAVD 88

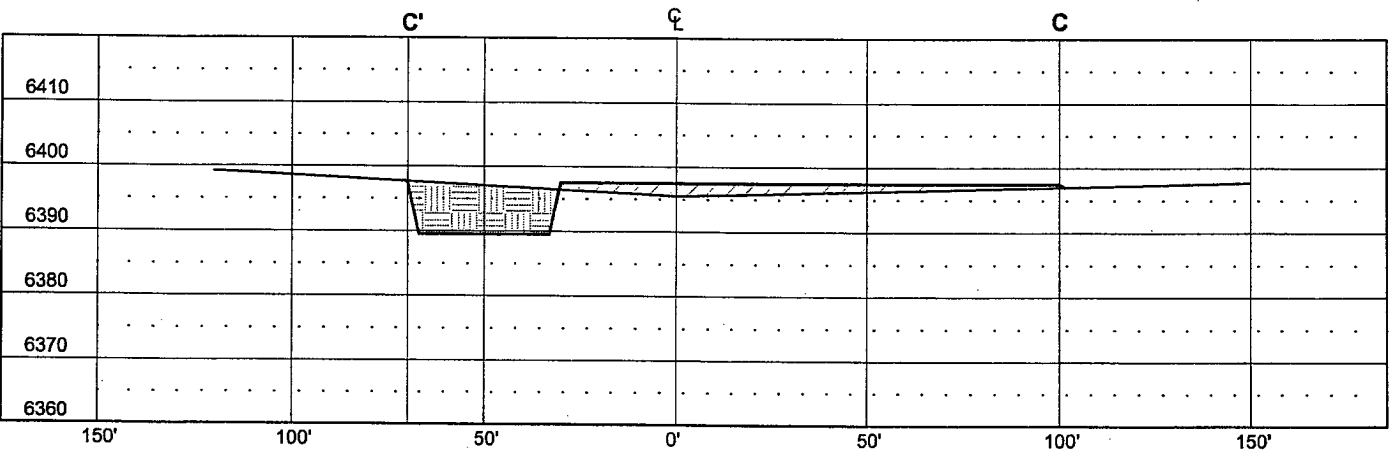
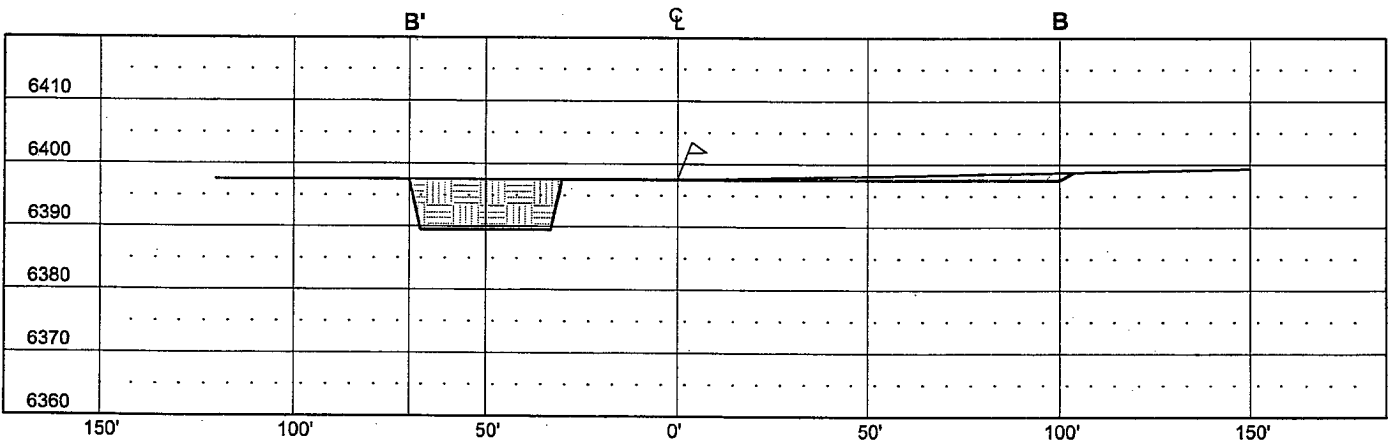
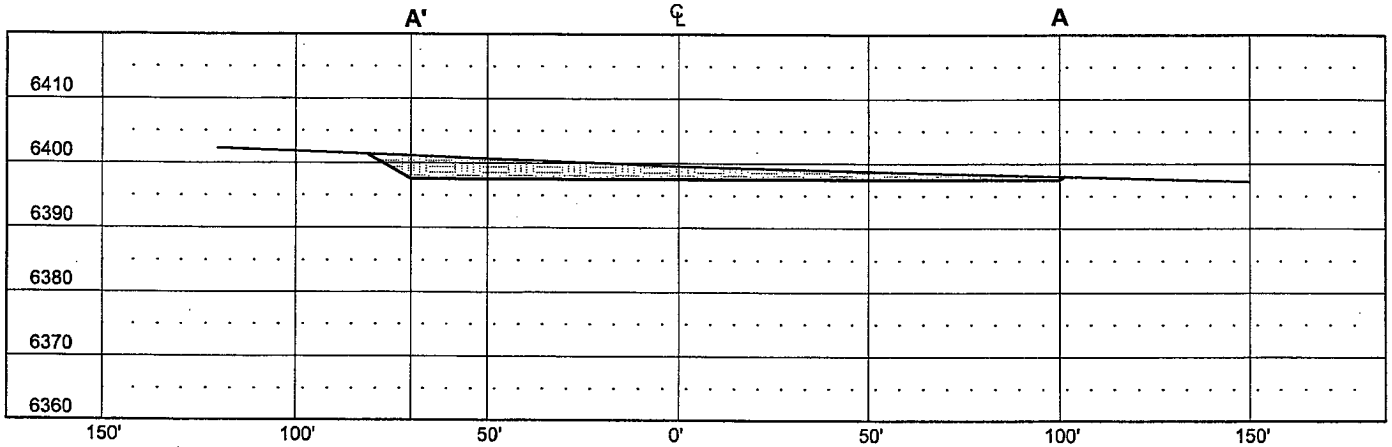


423 LF OF NEW ALONG PROPOSED
PIPELINE TO 2 TRACK ROAD

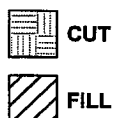
1 FOOT CONTOUR INTERVAL SHOWN
SCALE: 1" = 50'
JOB No.: ERE003
DATE: 11/13/06; REV1

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

ELM RIDGE EXPLORATION, LLC
CARSON UNIT 23 #11
790' FNL & 790' FWL
LOCATED IN THE NW/4 NW/4 OF
SECTION 23, T25N, R12W, N.M.P.M.,
SAN JUAN COUNTY, NEW MEXICO
GROUND ELEVATION: 6398', NAVD 88
FINISHED PAD ELEVATION: 6397.5', NAVD 88



VERT. SCALE: 1" = 30'
 HORZ. SCALE: 1" = 50'
 JOB No.: ERE003
 DATE: 11/13/06; REV1



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

Elm Ridge Exploration Company, LLC
Carson Unit 23 #11
790' FNL & 790' FWL
Sec. 23, 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>
Nacimiento	0'	12'	+6,398'
Fruitland Coal	1,123'	1,135'	+5,275'
Pictured Cliffs	1,178'	1,190'	+5,220'
Lewis Shale	1,378'	1,390'	+5,020'
Cliff House	1,548'	1,560'	+4,850'
Menefee Shale	2,613'	2,625'	+3,785'
Point Lookout	3,648'	3,660'	+2,750'
Mancos Shale	3,823'	3,835'	+2,575'
Gallup Sandstone	4,773'	4,785'	+1,625'
Total Depth	5,000'	5,012'	+1,398'

2. NOTABLE ZONES

<u>Oil &/or Gas Zones</u>	<u>Water Zones</u>	<u>Coal Zone</u>
Fruitland	Nacimiento	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
Carson Unit 23 #11
790' FNL & 790' FWL
Sec. 23, T. 25 N., R. 12 W.
San Juan County, New Mexico

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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 15.5	J-55	L T & C	New	5,000'

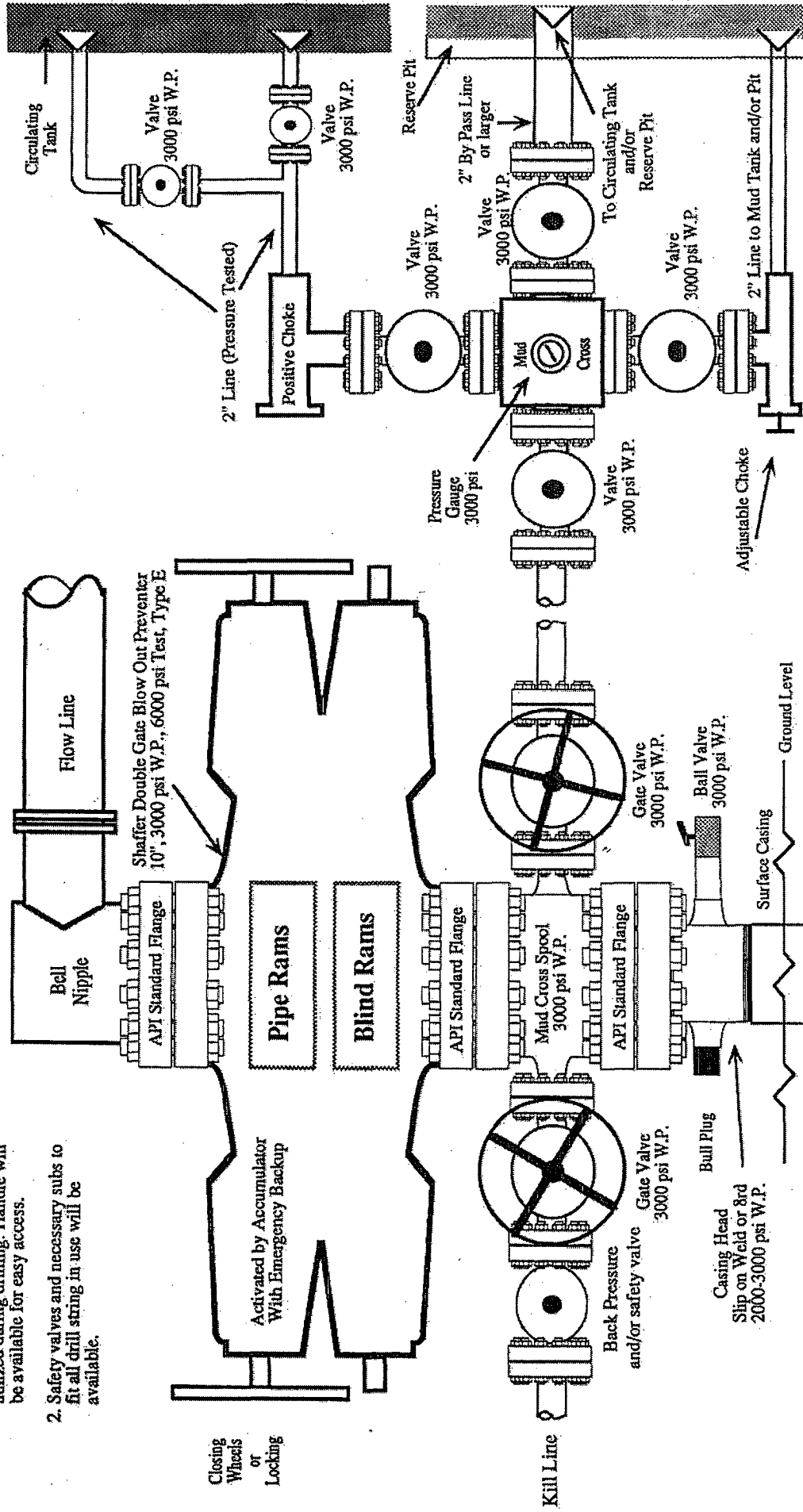
Surface casing will be cemented to the surface with ≈ 290 cubic feet (≈ 245 sacks) Class B with 1/4 pound per sack cellophane + 2% CaCl_2 . Yield = 1.18 cubic feet per sack. Weight = 15.2 pounds per gallon. Volume = 100% excess. Centralizers will be installed on the middle of the shoe joint and every 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 (≈ 2 dozen centralizers). Thread lock the guide shoe, bottom of float collar, and bottom of stage tool only. Use API casing dope.

2,000 PSI BOP SYSTEM

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.



Note: This equipment is designed to meet requirements for a 2-M rating standard per 43 CFR part 3160 (amended). Proper operation and testing of equipment will be carried out per standard. 2,000 psi equipment can be substituted in the drawing to meet minimum requirements per standard.

Elm Ridge Exploration Company, LLC
Carson Unit 23 #11
790' FNL & 790' FWL
Sec. 23, T. 25 N., R. 12 W.
San Juan County, New Mexico

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First stage volume will be ≈ 525 cubic feet consisting of ≈ 125 sacks of Halliburton light with 65/35 poz mix + 1/4 pound per sack cellophane + 2% CaCl_2 (yield = 1.87 cubic feet per sack, weight = 12.7 pounds per gallon) followed by ≈ 250 sacks Class B with 2% 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 ≈ 618 sacks of Halliburton light with 65/35 poz mix + 1/4 pound per sack cellophane + 2% CaCl_2 (yield = 1.87 cubic feet per sack, weight = 12.7 pounds per gallon) followed by ≈ 50 sacks of Class B with 2% 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.

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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 May 10, 2007. It is expected it will take 1 week to drill and 2 weeks to complete the well.