

Form 3160-3
(April 2004)

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

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. NMNM-025449
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. BISTI GALLUP 22 #16
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 795' FSL & 660' FEL At proposed prod. zone SAME		9. API Well No. 30-045-34130
14. Distance in miles and direction from nearest town or post office* 26 AIR MILES SE 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) 660'		11. Sec., T. R. M. or Blk. and Survey or Area P 22-25N-12W NMPM
16. No. of acres in lease 440	17. Spacing Unit dedicated to this well S2SE4 (= 80 acres) OEP	12. County or Parish SAN JUAN
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 997' (22 #15)	19. Proposed Depth 5,000'	13. State NM
20. BLM/BIA Bond No. on file BLM STATE WIDE 886201C	21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,353' GL	22. Approximate date work will start* 02/10/2007
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. | 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 12/23/2006
Title CONSULTANT		
PHONE: (505) 466-8120 FAX: (505) 466-9682		
Approved by (Signature) 	Name (Printed/Typed)	Date 1/29/07
Title AFU	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)

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".

NMOCD

NOTIFY AZTEC OCD
IN TIME TO WITNESS

24hrs
289 cement
2/1/07

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
611 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

2006 DEC 29 AM 8:43 ☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-34130	² Pool Code 5890	³ Pool Name BISTI LOWER - GALLUP
⁴ Property Code 36290	⁵ Property Name BISTI GALLUP 22	⁶ Well Number 16
⁷ GRID No. 149052	⁸ Operator Name ELM RIDGE EXPLORATION, LLC	⁹ Elevation 6353'

¹⁰ Surface Location

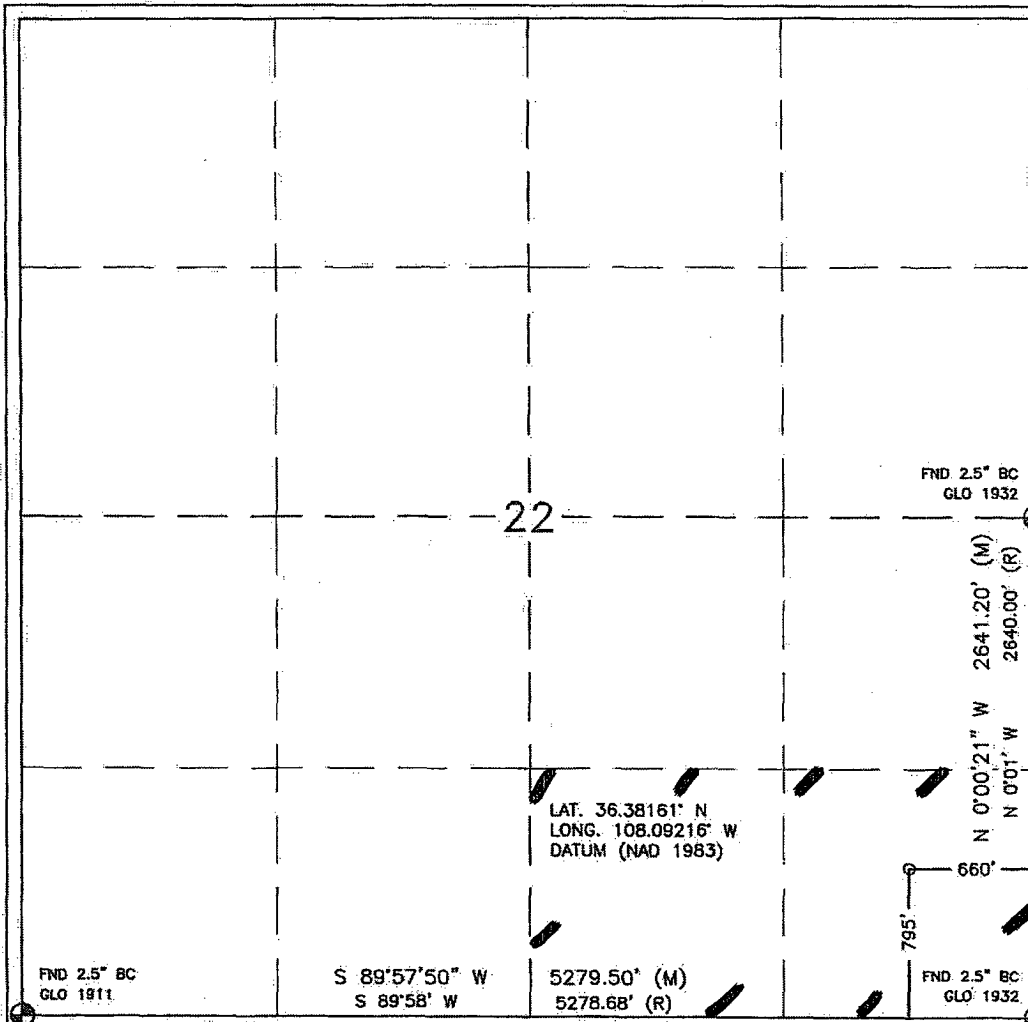
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	22	25N	12W		795'	SOUTH	660'	EAST	SAN JUAN

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			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



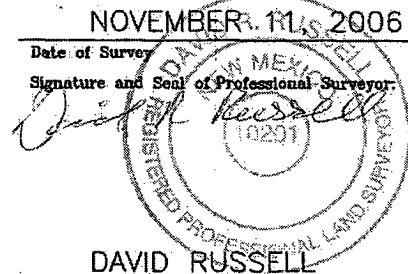
¹⁷ OPERATOR CERTIFICATION

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
CONSULTANT
Title
DEC. 23, 2006
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 11, 2006
Date of Survey
Signature and Seal of Professional Surveyor

DAVID RUSSELL
Certificate Number 10201

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

<p>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.)</p>		<p>WELL API NO. 30-045- <u>34130</u></p>
<p>1. Type of Well: Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/></p>		<p>5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/></p>
<p>2. Name of Operator ELM RIDGE EXPLORATION COMPANY, LLC</p>		<p>6. State Oil & Gas Lease No. NMNM-025449</p>
<p>3. Address of Operator P. O. BOX 156, BLOOMFIELD, NM 87413</p>		<p>7. Lease Name or Unit Agreement Name BISTI GALLUP 22</p>
<p>4. Well Location Unit Letter: P 795' FSL & 660' FEL Section 22 Township 25 North Range 12 West NMPM SAN JUAN County</p>		<p>8. Well Number 16</p>
<p>11. Elevation (Show whether DR, RKB, RT, GR, etc.) 6,353' GL</p>		<p>9. OGRID Number 149052</p>
<p>Pit or Below-grade Tank Application <input checked="" type="checkbox"/> or Closure <input type="checkbox"/></p>		
<p>Pit type: <u>DRILLING</u> Depth to Groundwater: <u>>100'</u> Distance from nearest fresh water well: <u>>1,000'</u> Distance from nearest surface water: <u>>500'</u></p>		
<p>Pit Liner Thickness: 12 mil Below-Grade Tank: Volume bbls; Construction Material</p>		

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
OTHER: DRILLING PIT <input checked="" type="checkbox"/>		OTHER: <input type="checkbox"/>	

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 Brian Wood TITLE: CONSULTANT DATE: DEC. 23, 2006

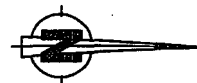
Type or print name: BRIAN WOOD E-mail address: brian@permitswest.com Telephone No.: (505) 466-8120
For State Use Only

APPROVED BY: [Signature] TITLE: DEPUTY OIL & GAS INSPECTOR, DIST. III DATE: FEB 01 2007
Conditions of Approval (if any):

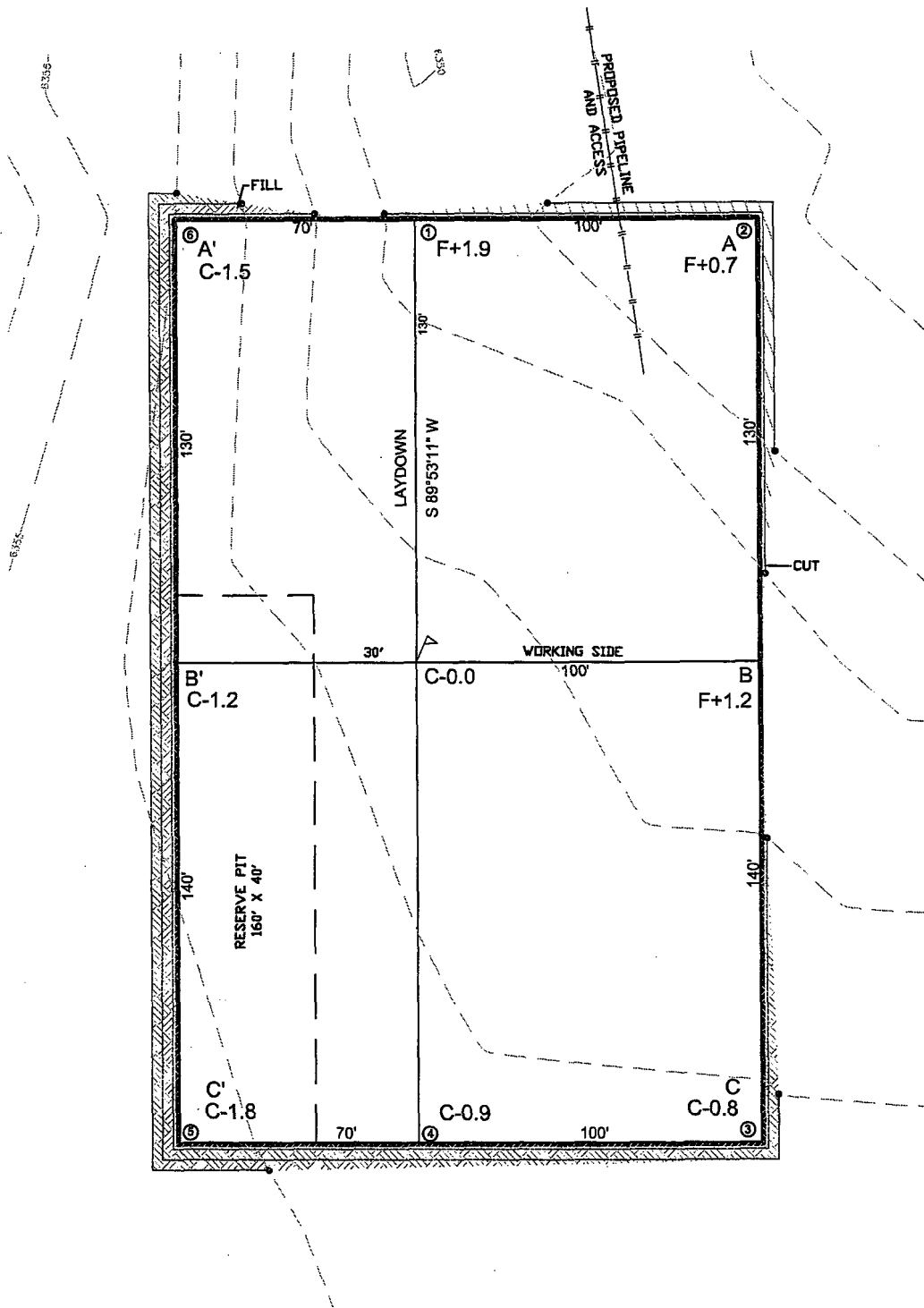
LATITUDE: 36.38161°N
LONGITUDE: 108.09216°W
DATUM: NAD 83

ELM RIDGE EXPLORATION, LLC

BISTI GALLUP 22 #16
795' FSL & 660' FEL
LOCATED IN THE SE/4 SE/4 OF
SECTION 22, T25N, R12W, N.M.P.M.,
SAN JUAN COUNTY, NEW MEXICO
GROUND ELEVATION: 6353', NAVD 88
FINISHED PAD ELEVATION: 6352.5', NAVD 88



25' 0 25' 50'
SCALE = 50'



727 LF OF NEW ACCESS TO PROPOSED
ELM RIDGE - BISTI GALLUP 22 #15 WELL PAD

1 FOOT CONTOUR INTERVAL SHOWN
SCALE: 1" = 50'
JOB No.: ERE008
DATE: 11/15/06



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

ELM RIDGE EXPLORATION, LLC

BISTI GALLUP 22 #16

795' FSL & 660' FEL

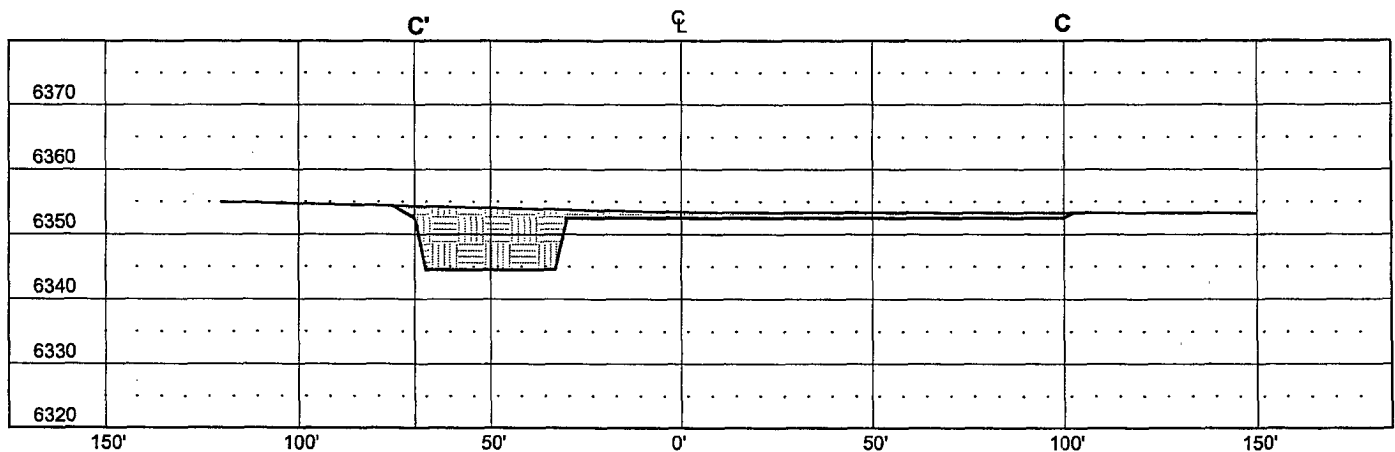
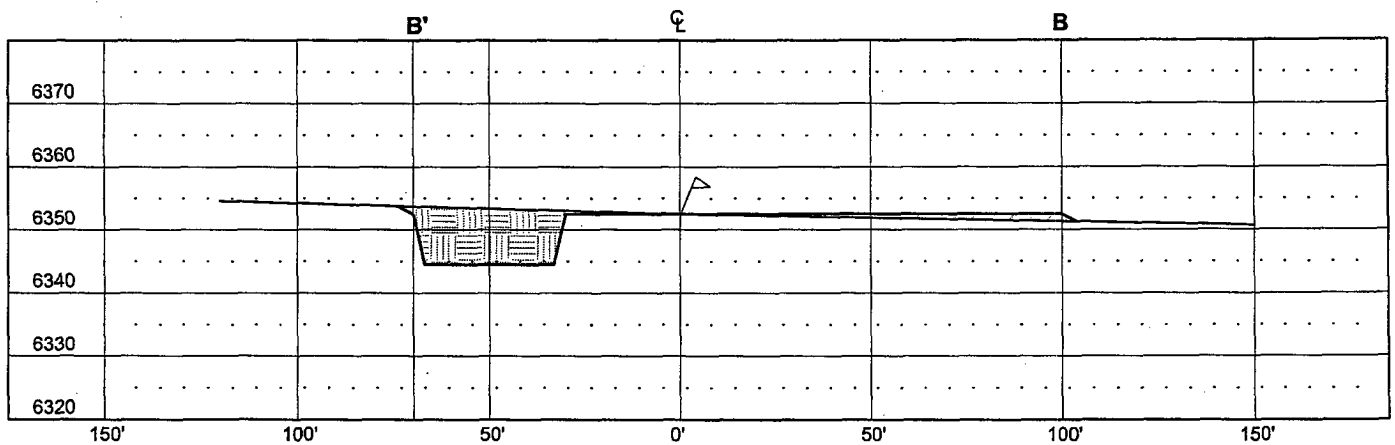
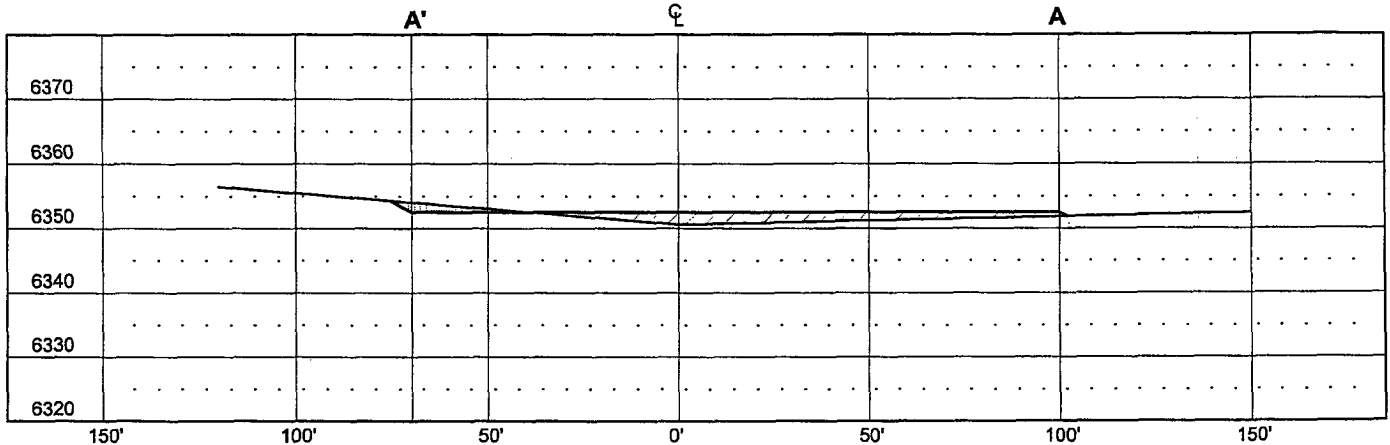
LOCATED IN THE SE/4 SE/4 OF

SECTION 22, T25N, R12W, N.M.P.M.,

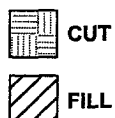
SAN JUAN COUNTY, NEW MEXICO

GROUND ELEVATION: 6353', NAVD 88

FINISHED PAD ELEVATION: 6352.5', NAVD 88



VERT. SCALE: 1" = 30'
HORZ. SCALE: 1" = 50'
JOB No.: ERE008
DATE: 11/15/06



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

Elm Ridge Exploration Company, LLC
Bisti Gallup 22 #16
795' FSL & 660' FEL
Sec. 21, T. 25 N., R. 12 W.
San Juan County, New Mexico

PAGE 1

Drilling Program

1. ESTIMATED FORMATION TOPS

<u>Formation</u>	<u>GL Depth</u>	<u>KB Depth</u>	<u>Elevation</u>
Nacimiento	0'	12'	+6,353'
Fruitland Coal	1,063'	1,075'	+5,290'
Pictured Cliffs	1,123'	1,135'	+5,230'
Lewis Shale	1,263'	1,275'	+5,090'
Cliff House	1,443'	1,455'	+4,910'
Menefee Shale	2,513'	2,525'	+3,840'
Point Lookout	3,553'	3,565'	+2,800'
Mancos Shale	3,713'	3,725'	+2,640'
Gallup Sandstone	4,628'	4,640'	+1,725'
Total Depth	5,000'	5,012'	+1,353'

2. NOTABLE ZONES

Oil &/or Gas Zones

Fruitland
Pictured Cliffs
Gallup

Water Zones

Nacimiento
Fruitland
Pictured Cliffs

Coal Zone

Fruitland

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
Bisti Gallup 22 #16
795' FSL & 660' FEL
Sec. 21, T. 25 N., R. 12 W.
San Juan County, New Mexico

PAGE 2

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

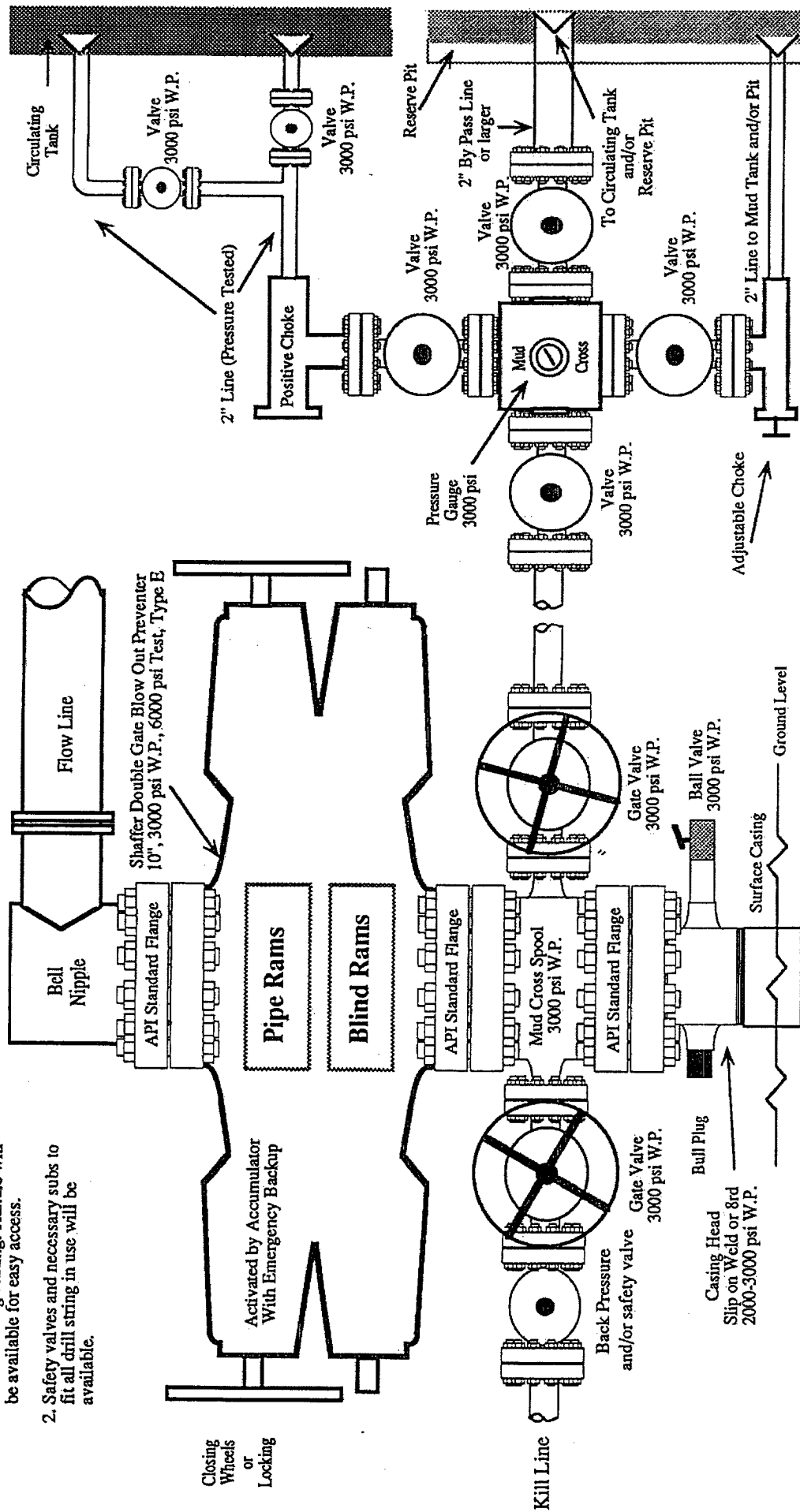
Surface casing will be cemented to the surface with ≈ 290 cubic feet (≈ 245 sacks) Class B with 1/4 pound per sack cellophane + 2% CaCl_2 . Yield = 1.18 cubic feet per sack. Weight = 15.2 pounds per gallon. Volume = 100% excess. Centralizers will be installed on the middle of the shoe joint and every 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
Bisti Gallup 22 #16
795' FSL & 660' FEL
Sec. 21, T. 25 N., R. 12 W.
San Juan County, New Mexico

PAGE 4

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.

Elm Ridge Exploration Company, LLC
Bisti Gallup 22 #16
795' FSL & 660' FEL
Sec. 21, T. 25 N., R. 12 W.
San Juan County, New Mexico

PAGE 5

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