

Form 3160-3
(April 2004)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

DIST. 3

5. Lease Serial/No.
NMNM-0254466. If Indian, Allottee or Tribe Name
N/A7. If Unit or CA Agreement, Name and No.
N/A8. Lease Name and Well No.
BISTI GALLUP 18 #69. API Well No.
30-045-3380310. Field and Pool, or Exploratory
BISTI LOWER-GALLUP11. Sec., T. R. M. or Blk. and Survey or Area
F- 18-25N-12W NMPM12. County or Parish
SAN JUAN13. State
NM1a. Type of work: ☒ DRILL☐ REENTER1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone2. Name of Operator
ELM RIDGE EXPLORATION COMPANY, LLC3a. Address P. O. BOX 156
BLOOMFIELD, NM 874133b. Phone No. (include area code)
(505) 632-34764. Location of Well (Report location clearly and in accordance with any State requirements.)*
At surface 2310' FNL & 1640' FWL
At proposed prod. zone SAME14. Distance in miles and direction from nearest town or post office*
23 AIR MILES S OF FARMINGTON, NM15. Distance from proposed*
location to nearest
property or lease line, ft.
(Also to nearest drig. unit line, if any) 1,640'16. No. of acres in lease
637.9617. Spacing Unit dedicated to this well
LOT 2 & SENW18. Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft. 1,612' (18 #2)19. Proposed Depth
5,300'20. BLM/BIA Bond No. on file
BLM STATE WIDE 886201C21. Elevations (Show whether DF, KDB, RT, GL, etc.)
6,496' GL22. Approximate date work will start*
12/01/200623. 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:

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

25. Signature

Name (Printed/Typed)

BRIAN WOOD

Date

06/13/2006

Title

CONSULTANT

PHONE: (505) 466-8120

FAX: (505) 466-9682

Approved by (Signature)

Name (Printed/Typed)

Wayne Townsend

Date

2/27/07

Title

Acting AFM

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)

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS".This action is subject to technical and
procedural review pursuant to 43 CFR 3168.3
and appeal pursuant to 43 CFR 3168.4

NMOC

B.

3/2/07

DISTRICT I
P.O. Box 1980, Hobbs, N.M. 88241-1980

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 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

RCVD FEB28'07

OIL CONS. DIV.
DIST. 3

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-33803	² Pool Code 5890	³ Pool Name BISTI LOWER-GALLUP
⁴ Property Code 310343	⁵ Property Name BISTI GALLUP 18	⁶ Well Number 6
⁷ GRID No. 149052	⁸ Operator Name ELM RIDGE EXPLORATION	⁹ Elevation 6496

¹⁰ Surface Location

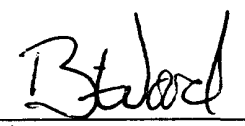
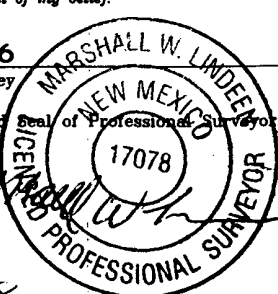
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	18	25 N	12 W		2310	NORTH	1640	WEST	SAN JUAN

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 79.48	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

18 S 89°49'31" E	2620.01'	S 89°52'12" E	2639.63'	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 JUNE 13, 2006 Date
2640.51'	2310'			
N 0°12'10" E				
1640'	LAT. 36.402096° LONG. 108.156008° NAD 83	SECTION 18		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. 3/21/06 Date of Survey Signature and Seal of Professional Surveyor:  17078 Certificate Number
2639.38'				
N 0°11'57" E				
N 89°49'15" W	2624.46'	N 89°49'52" W	2639.94'	

* PROPOSED LOCATION IS 339' EAST OF WEST LINE OF SE/4 NW/4

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

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

WELL API NO. 30-045- 33803
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. NMNM-025446
7. Lease Name or Unit Agreement Name BISTI GALLUP 18
8. Well Number 6
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: F 2310' FNL & 1640' FWL
Section 18 Township 25 North Range 12 West NMPM SAN JUAN County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
6,496' GL

Pit or Below-grade Tank Application ☒ or Closure ☐

Pit type: DRILLING Depth to Groundwater: >100' Distance from nearest fresh water well: >4,000' 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 ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: DRILLING PIT ☒

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 Brian Wood TITLE: CONSULTANT

DATE: JUNE 5, 2006

Type or print name: BRIAN WOOD

E-mail address: brian@permitswest.com

Telephone No.: (505) 466-8120

For State Use Only

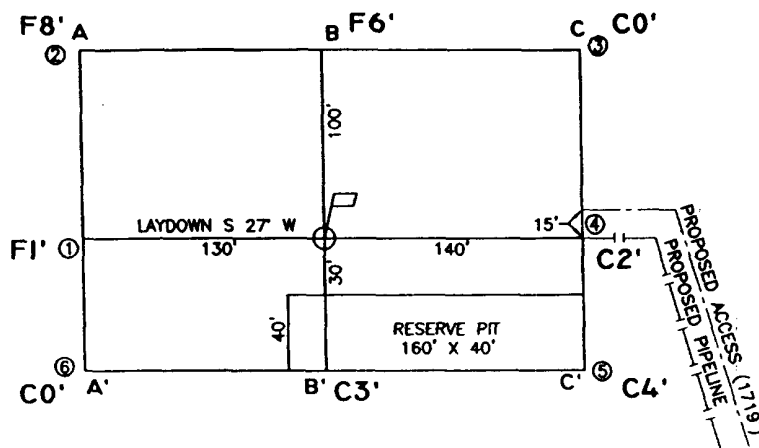
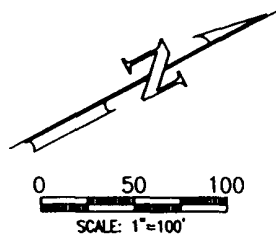
APPROVED BY: [Signature]

TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 03

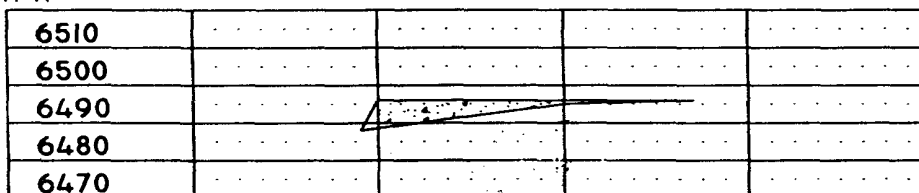
DATE 2/28/07

Conditions of Approval (if any):

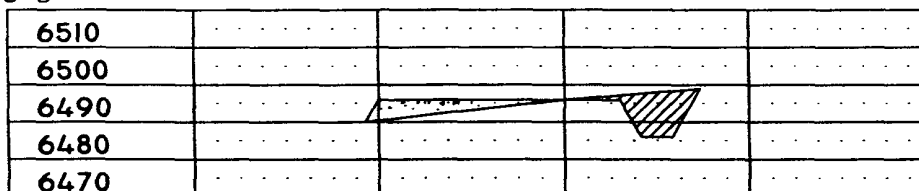
INOTIFY
NEW MEXICO ONE-CALL
BEFORE COMMENCING
EXCAVATION!
(800) 321-2637



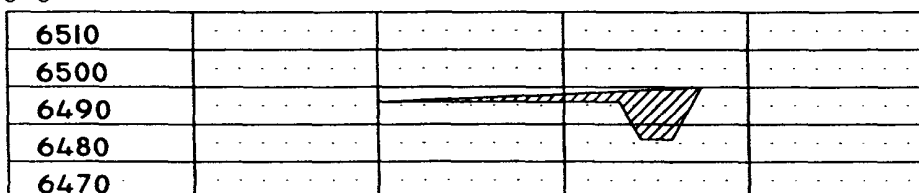
A-A'



B-B'



C-C'



CROSS SECTIONS

HORIZONTAL: 1"=100'

VERTICAL: 1"=10'

LEASE: BISTI GALLUP 18 #6

FOOTAGE: 2310' FNL, 1640' FWL

SEC. 18 TWN. 25 N RNG. 12 W N.M.P.M.

LATITUDE: 36.402096° LONGITUDE: 108.156008°

ELEVATION: 6496

ELM RIDGE EXPLORATION DALLAS, TEXAS

SURVEYED: 3/21/06

REV. DATE:

APP. BY R.P.

DRAWN BY: A.D.

DATE DRAWN: 3/29/06

FILE NAME: 6630C01



P.O. BOX 3651
FARMINGTON, NM 87499
OFFICE: (505) 334-0408

Elm Ridge Exploration Company, LLC
Bisti Gallup 18 #6
2310' FNL & 1640' FWL
Sec. 18, 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'	+6,496'
Fruitland	1,146'	1,158'	+5,350'
Pictured Cliffs	1,421'	1,433'	+5,075'
Lewis Shale	1,546'	1,558'	+4,950'
Cliff House	2,146'	2,158'	+4,350'
Menefee Shale	2,796'	2,308'	+3,700'
Point Lookout	3,846'	3,858'	+2,650'
Mancos Shale	4,026'	4,038'	+2,470'
Gallup Sandstone	4,936'	4,948'	+1,560'
Total Depth	5,300'	5,712'	+1,196'

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.

3. PRESSURE CONTROL

The drilling contract has not yet been awarded, thus the exact BOP model to be

Elm Ridge Exploration Company, LLC
Bisti Gallup 18 #6
2310' FNL & 1640' FWL
Sec. 18, T. 25 N., R. 12 W.
San Juan County, New Mexico

PAGE 2

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.

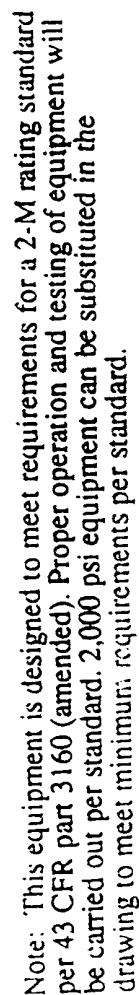
4. CASING & CEMENT

<u>Hole Size</u>	<u>O. D.</u>	<u>Weight (lb/ft)</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	5,300'

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 (total ≈ 25 centralizers). Thread lock the guide shoe, bottom of float collar, and bottom of stage tool only. Use API casing dope.

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



Elm Ridge Exploration Company, LLC
Bisti Gallup 18 #6
2310' FNL & 1640' FWL
Sec. 18, T. 25 N., R. 12 W.
San Juan County, New Mexico

PAGE 4

First stage volume will be ≈ 625 cubic feet consisting of ≈ 150 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 ≈ 292 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 18 #6
2310' FNL & 1640' FWL
Sec. 18, 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 $\leq 2,280$ psi.

8. OTHER INFORMATION

The anticipated spud date is December 1, 2006. It is expected it will take 1 week to drill and 2 weeks to complete the well.