

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

752 22 AM 8: 44

EENTER

24. Attachments

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.

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.

 $\frac{f}{f}$

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

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

2/1/07

SECRET

*API Number 30-045-34131		*Pool Code 5890	*Pool Name BISTI LOWER-GALLUP	
*Property Code 27280	*Property Name SOUTH BISTI CREEK 21H			*Well Number 2
*OGRID No. 149052	*Operator Name ELM RIDGE EXPLORATION, LLC			*Elevation 6288'

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
G	21	25N	12W		1980'	NORTH	1920'	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
13 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

OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

FND 2 1/2" BC
GLO 1911

S 89°55'55" W
N 89°59' W

5278.90' (M)
5277.36' (R)

FND 2 1/2" BC
GLO 1911

LAT. 36.38850" N
LONG. 108.11440" W
DATUM (NAD 1983)

1980'

5273.40' (M)
5280.00' (R)

1920'

21

N 0°01'37" W
N 0°02' W

FND 2 1/2" BC
GLO 1911

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. 21, 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.

OCTOBER 18, 2006

Date of Survey

Signature and Seal of Professional Surveyor

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- <u>34131</u>
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. NMSF-078065
7. Lease Name or Unit Agreement Name SOUTH BISTI GALLUP 21 H
8. Well Number <u>2</u>
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: G 1980' FNL & 1920' FEL
Section 21 Township 25 North Range 12 West NMPM SAN JUAN County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
6,288' GL

Pit or Below-grade Tank Application ☒ or Closure ☐

Pit type: DRILLING Depth to Groundwater: >100' Distance from nearest fresh water well: >4000' Distance from nearest surface water: >100'

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:		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. 21, 2006

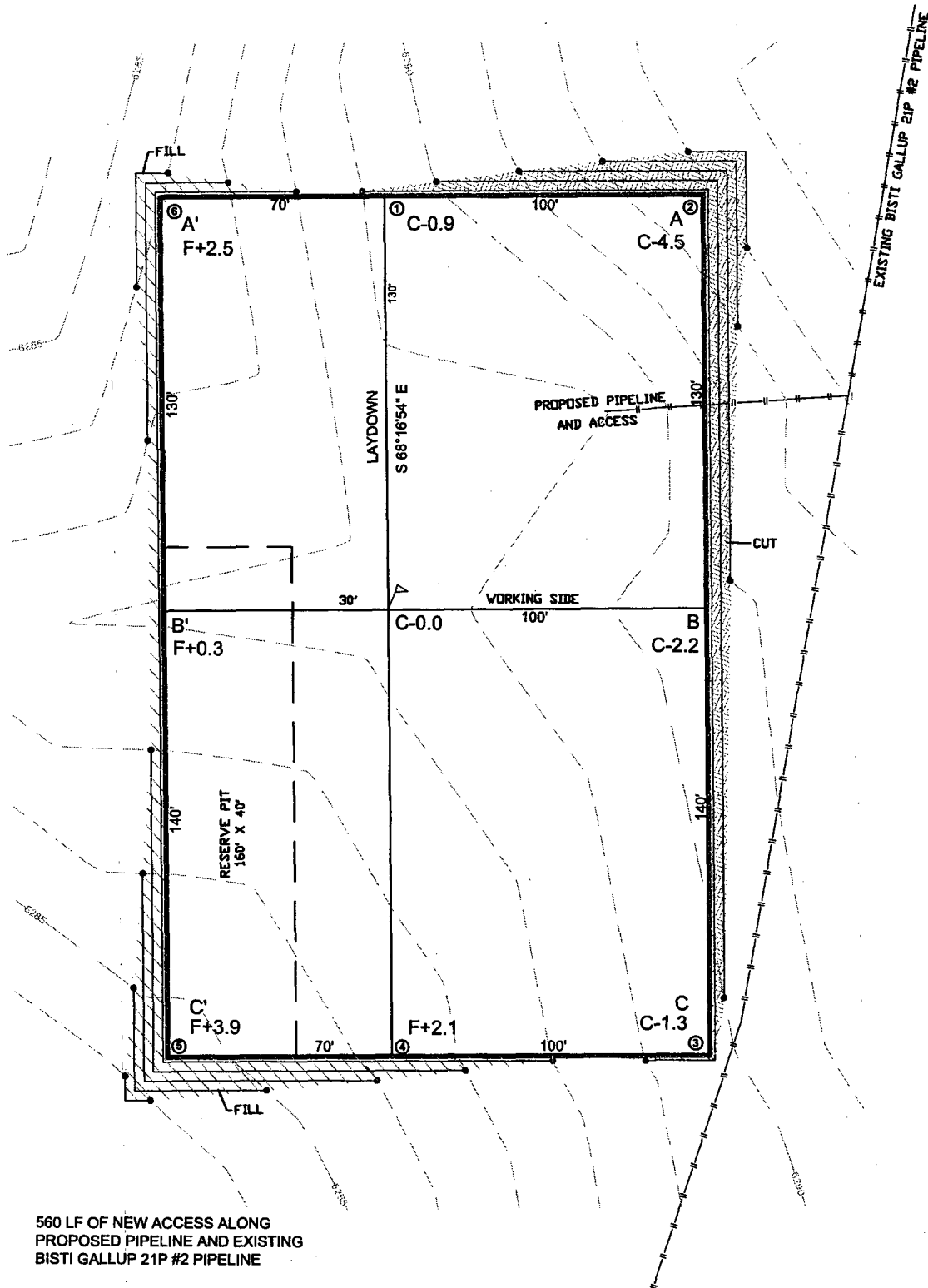
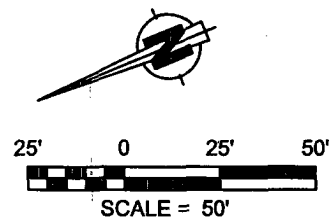
Type or print name: BRIAN WOOD E-mail address: brian@permitswest.com Telephone No.: (505) 466-8120

For State Use Only


APPROVED BY: [Signature] TITLE: DEPUTY OIL & GAS INSPECTOR, DIST. #3 DATE: FEB 01 2007
Conditions of Approval (if any):

LATITUDE: 36.38850°N
LONGITUDE: 108.11440°W
DATUM: NAD 83

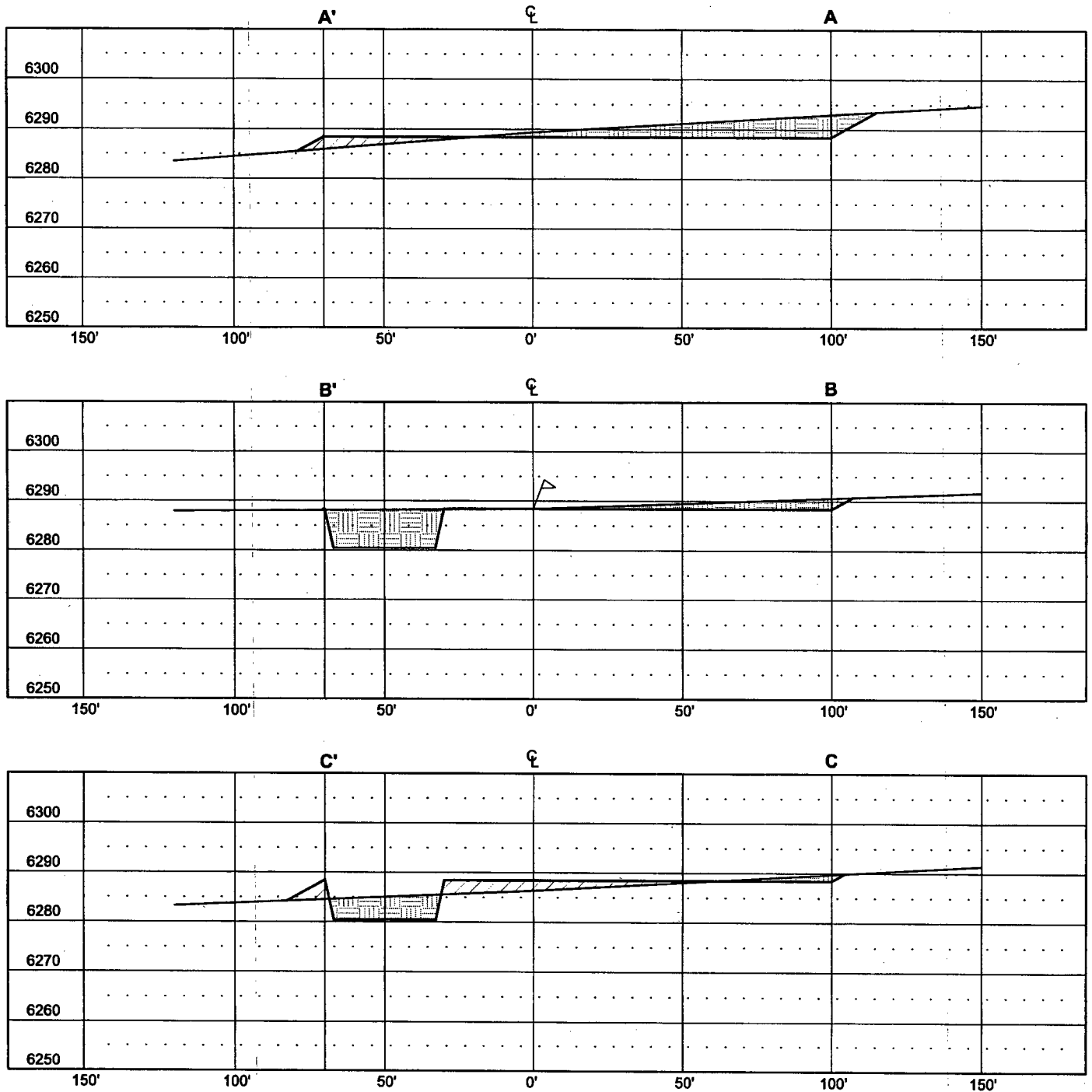
ELM RIDGE EXPLORATION, LLC
SOUTH BISTI GALLUP 21H #2
1980' FNL & 1920' FEL
LOCATED IN THE SW/4 NE/4 OF
SECTION 21, T25N, R12W, N.M.P.M.,
SAN JUAN COUNTY, NEW MEXICO
GROUND ELEVATION: 6288', NAVD 88
FINISHED PAD ELEVATION: 6288.4', NAVD 88



1 FOOT CONTOUR INTERVAL SHOWN
SCALE: 1" = 50'
JOB No.: ERE004
DATE: 11/14/06; REV1

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

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SOUTH BISTI GALLUP 21H #2
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LOCATED IN THE SW/4 NE/4 OF
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SAN JUAN COUNTY, NEW MEXICO
GROUND ELEVATION: 6288', NAVD 88
FINISHED PAD ELEVATION: 6288.4', NAVD 88



VERT. SCALE: 1" = 30'
 HORZ. SCALE: 1" = 50'
 JOB No.: ERE004
 DATE: 11/14/06; REV1



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Elm Ridge Exploration Company, LLC
South Bisti Gallup 21 H #2
1980' FNL & 1920' 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>
Nacimiento	0'	12'	+6,288'
Fruitland Coal	1,073'	1,085'	+5,215'
Pictured Cliffs	1,113'	1,125'	+5,175'
Lewis Shale	1,303'	1,315'	+4,985'
Cliff House	1,858'	1,870'	+4,430'
Menefee Shale	2,498'	2,510'	+3,790'
Point Lookout	3,553'	3,565'	+2,735'
Mancos Shale	3,748'	3,760'	+2,540'
Gallup Sandstone	4,613'	4,625'	+1,675'
Total Depth	5,000'	5,012'	+1,288'

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.

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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.

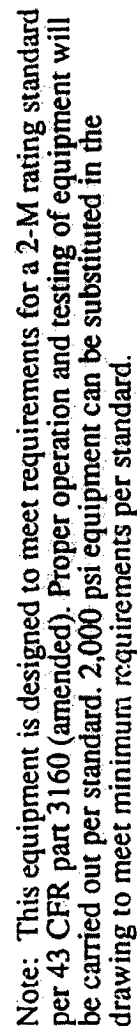
4. CASING & CEMENT

<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. 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.

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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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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 January 20, 2007. It is expected it will take 1 week to drill and 2 weeks to complete the well.