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OCU-ARTESIA

UNITED STATES

DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

N.M. Oil Cons. Div-Dist. 2  
1301 W. Grand Avenue  
Artesia, NM 88210

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

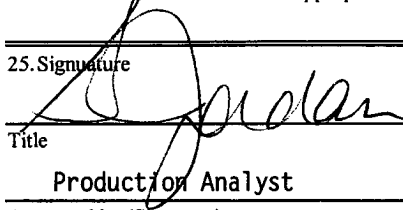
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMLC026874F	
1b. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator Nearburg Producing Company		7. Unit or CA Agreement Name and No.	
3a. Address 3300 N A St., Bldg 2, Ste 120, Midland, TX 79705		8. Lease Name and Well No. Red Lake 33 Federal E #1	
3b. Phone No. (include area code) 432/686-8235		9. API Well No. 30-015-34421	
4. Location of Well (Report location clearly and in accordance with any State requirements)* At surface 1650 FNL and 900 FWL At proposed prod. zone		10. Field and Pool, or Exploratory Red Lake; Glorieta- Yeso	
14. Distance in miles and direction from nearest town or post office* 6 miles SE of Artesia		11. Sec., T., R., M., or Blk. and Survey or Area Sec 33-17S-27E	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) 900		12. County or Parish Eddy	
16. No. of Acres in lease 280		13. State NM	
17. Spacing Unit dedicated to this well 40		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1980	
19. Proposed Depth 3700		20. BLM/BIA Bond No. on file NM1307 NMB0000153 EAH	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3516		22. Approximate date work will start* 11/15/05	
		23. Estimated duration 30 Days	

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) Sarah Jordan	Date 10/6/05
Title Production Analyst		
Approved by (Signautre) /s/ James Stovall	Name (Printed/Typed) /s/ James Stovall	Date NOV 08 2005
Title Acting FIELD MANAGER		
Office CARLSBAD FIELD 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.

APPROVAL FOR 1 YEAR

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)

Roswell Controlled Water Basin

Witness Surface Casing

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

# State of New Mexico

DISTRICT I  
1625 N. FRENCH DR., HOBBS, NM 88240

Energy, Minerals and Natural Resources Department

DISTRICT II  
1301 W. GRAND AVENUE, 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, New Mexico 87505

Form C-102  
Revised JUNE 10, 2003  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

### WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code 51120	Pool Name Red Lake - Glorieta - Xpo
Property Code	Property Name RED LAKE 33 FEDERAL E	Well Number 1
OGRID No. 015742	Operator Name NEARBURG PRODUCING COMPANY	Elevation 3516'

#### Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	33	17-S	27-E		1650	NORTH	900	WEST	EDDY

#### 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
Dedicated Acres 40	Joint or Infill	Consolidation Code	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

<p>GEODETIC COORDINATES NAD 27 NME  Y=652323.7 N X=513845.8 E  LAT.=32°47'35.95" N LONG.=104°17'17.79" W</p>	<b>OPERATOR CERTIFICATION</b>  I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.  Signature: <i>[Signature]</i> Printed Name: <i>Prod Analyst</i> Title: Date: <i>10-6-05</i>
	<b>SURVEYOR CERTIFICATION</b>  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.  SEPTEMBER 9, 2005 Date Surveyed: JR Signature & Seal of Professional Surveyor: <i>[Signature]</i> Certificate No. GARY EIDSON 12641
	12641
	05.11.385

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, 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-144  
March 12, 2004

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

For drilling and production facilities, submit to appropriate NMOCD District Office.  
For downstream facilities, submit to Santa Fe office.

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☒  
Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

Operator: <u>Nearburg Producing Company</u> Telephone: <u>432 686-8235</u> Ext <u>203</u> e-mail address: <u>s.jordan@nearburg.com</u> Address: <u>3300 N A St., Bldg 2, Ste 120, Midland, TX 79705</u> Facility or well name: <u>Red Lake 33 FEDE #1</u> API#: _____ U/L or Qtr/Qtr <u>E</u> Sec <u>32</u> T <u>17S</u> R <u>27E</u> County: <u>Eddy</u> Latitude _____ Longitude _____ NAD: 1927 <input checked="" type="checkbox"/> 1983 <input type="checkbox"/> Surface Owner Federal <input checked="" type="checkbox"/> State <input type="checkbox"/> Private <input type="checkbox"/> Indian <input type="checkbox"/>		
<b>Pit</b> Type: Drilling <input checked="" type="checkbox"/> Production <input type="checkbox"/> Disposal <input type="checkbox"/> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined <input checked="" type="checkbox"/> Unlimited <input type="checkbox"/> Liner type: Synthetic <input checked="" type="checkbox"/> Thickness <u>12</u> mil Clay <input type="checkbox"/> Volume _____ bbl	<b>Below-grade tank</b> Volume: _____ bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not: _____	<b>RECEIVED</b> OCT 07 2005 OCD-ARTESIA
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more	(20 points) (10 points) (0 points) X
Wellhead protection area. (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes No	(20 points) (0 points) X
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet 200 feet or more, but less than 1000 feet 1000 feet or more	(20 points) (10 points) (0 points) X
<b>Ranking Score (Total Points)</b>		<b>0</b>

If this is a pit closure: (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: onsite ☐ offsite ☐ If offsite, name of facility \_\_\_\_\_ (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface \_\_\_\_\_ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines <input checked="" type="checkbox"/> , a general permit <input type="checkbox"/> , or an (attached) alternative OCD-approved plan <input type="checkbox"/> .	
Date: <u>10.6.05</u>	
Printed Name/Title: <u>Sarah Jordan, Production Analyst</u>	Signature: <u>[Signature]</u>
Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Approval: <b>OCT 7 2005</b>	
Date: _____	
Printed Name/Title: _____	Field Supervisor Signature: <u>[Signature]</u>

**STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS**

Nearburg Producing Company  
3300 North "A" Street, Building 2, Suite 120  
Midland, Texas 77905

The undersigned accepts all applicable terms, conditions, stipulations and restrictions covering operations conducted on the leased land or portion thereof, as described below:

Lease No: NMLC026874F

Legal Description of Land: 1650 FNL and 900 FWL, Sec 33, 17S, 27E  
Eddy County, New Mexico

Formation(s) (if applicable): Red Lake; Glorietta - Yeso

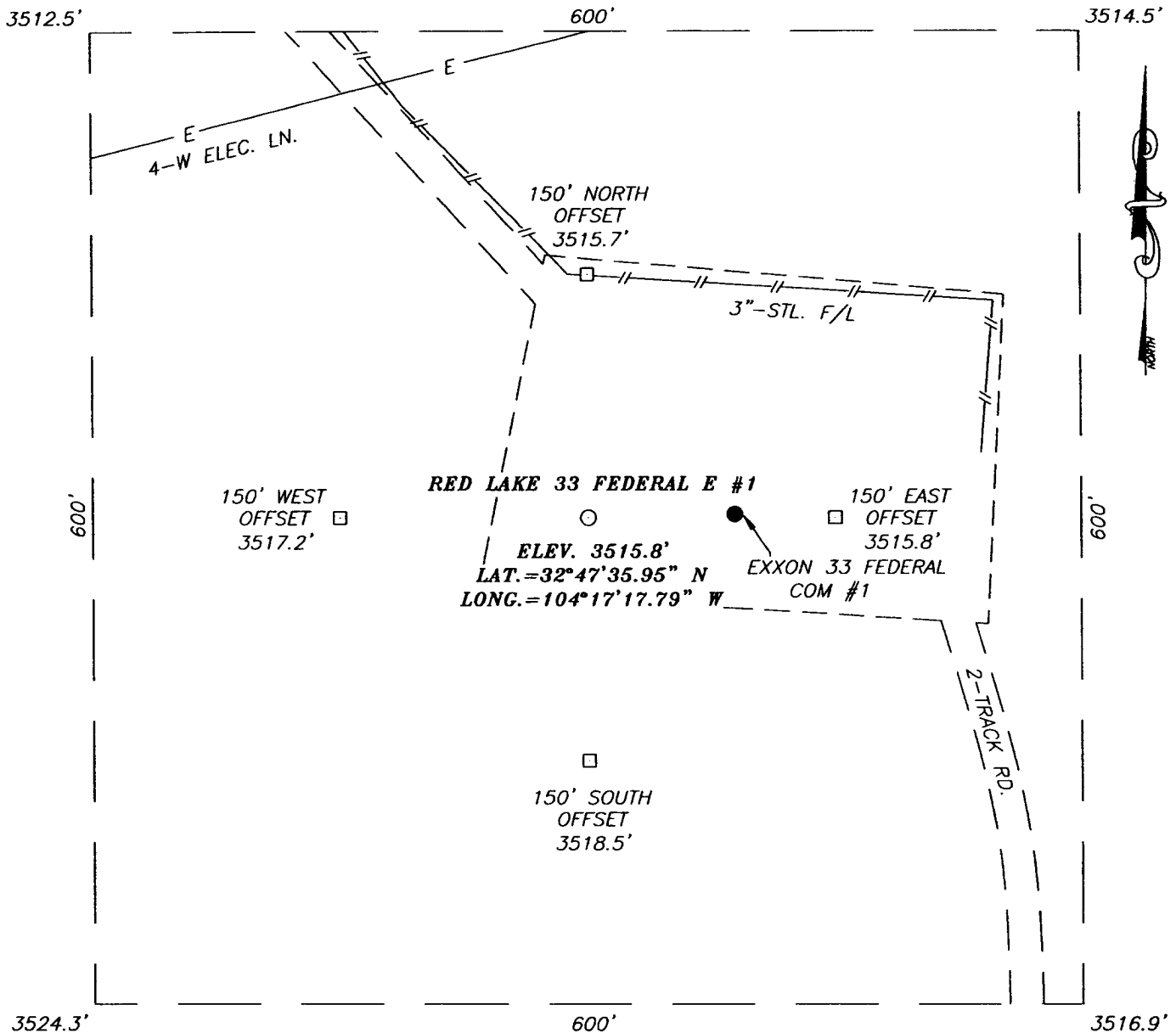
Bond Coverage: \$25,000 statewide bond of Nearburg Producing Company

BLM Bond File No: NMB000153

10.6.05  
Date

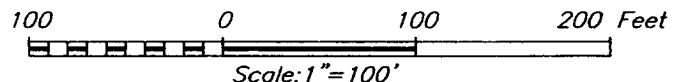
H. R. Willis  
H. R. Willis  
Drilling Manager

**SECTION 33, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M.,**  
 EDDY COUNTY, NEW MEXICO



**DIRECTIONS TO LOCATION**

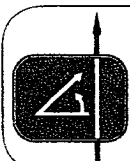
FROM U.S. HWY. #82 AND CO. RD. #201 (CHALK BLUFF RD.) GO SOUTH ON CO. RD. #201 APPROX. 1.6 MILES TO A CALICHE ROAD ON THE LEFT. TURN LEFT (EAST) AND GO APPROX. 0.8 MILES TO A "Y" INTERSECTION. TURN RIGHT (SE) AND GO APPROX. 0.2 MILES, BEND SW AND GO APPROX. 0.4 MILES, BEND SE AND GO APPROX. 0.7 MILES TO THE EXXON 33 FEDERAL COM #1 WELL. THIS LOCATION IS APPROX. 90' WEST.



**NEARBURG PRODUCING COMPANY**

RED LAKE 33 FEDERAL E #1 WELL  
 LOCATED 1650 FEET FROM THE NORTH LINE  
 AND 900 FEET FROM THE WEST LINE OF SECTION 33,  
 TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M.,  
 EDDY COUNTY, NEW MEXICO.


Survey Date: 09/09/05	Sheet 1 of 1 Sheets
W.O. Number: 05.11.1385	Dr By: J.R.
Date: 09/15/05	Rev 1: N/A
Disk: CD#5	05111385
Scale: 1\"=100'	



PROVIDING SURVEYING SERVICES  
 SINCE 1946  
**JOHN WEST SURVEYING COMPANY**  
 412 N. DAL PASO  
 HOBBS, N.M. 88240  
 (505) 383-3117



CONTOUR INTERVAL:  
SPRING LAKE, N.M. - 10'



**PROVIDING SURVEYING SERVICES  
SINCE 1948**

**JOHN WEST SURVEYING COMPANY**

**412 N. DAL PASO  
HOBBES, N.M. 88240  
(505) 383-3117**

**ATTACHMENT TO FORM 3160-3  
RED LAKE 33 FEDERAL E #1  
1650 FNL AND 900 FWL, SEC 33, 17S, 27E  
EDDY COUNTY, NEW MEXICO**

**DRILLING PROGRAM**

1. GEOLOGIC NAME OF SURFACE FORMATION

Quaternary

2. ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS

Glorretta 2800  
Yeso 2900

3. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL, OR GAS

Yeso 2900 Oil

4. CASING AND CEMENTING PROGRAM

<u>Casing Size</u>	<u>From</u> <u>To</u>	<u>Weight</u>	<u>Grade</u>	<u>Joint</u>	<b>WITNESS</b>
8-5/8"	0' – 1,200'	32#	K55	STC	
5-1/2"	0' – 3,700'	17#	J55	LTC	

Equivalent or adequate grades and weights of casing may be substituted at time casing is run, depending on availability.

We plan to drill a 12-1/4" hole to equal 1,200'. 8-5/8" casing will be cemented with 600 sxs Class "C" or volume necessary to bring cement back to surface.

7-7/8" hole will be drilled to 3,700' and 5-1/2" production casing will be cemented with approximately 500 sxs of Class "C" cement circulated to surface.

## **RED LAKE 33 FEDERAL E #1**

### **Page 2**

#### **5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL**

The BOP stack will consist of a 3,000 psi working pressure, dual ram type preventer and annular.

A BOP sketch is attached.

#### **6. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM**

Spud and drill to 1,200' with fresh water mud for surface string. The production section from 1,200' to 3,700' will be 10.0 ppg Brine Water system with mud weight sufficient to control formation pressures.

#### **7. AUXILLARY WELL CONTROL AND MONITORING EQUIPMENT**

None required.

#### **8. LOGGING, TESTING, AND CORING PROGRAM**

DLL/CNL/LDT/CAL/GR logging is planned. Drill stem tests, cores and sidewall cores are possible.

#### **9. ABNORMAL CONDITIONS, PRESSURES, TEMPERATURES & POTENTIAL HAZARDS**

None anticipated.

BHP expected to be 1,100 psi.

#### **10. ANTICIPATED STARTING DATE:**

Is planned that operations will commence on November 15, 2005 with drilling and completion operation lasting about 30 days.



**RED LAKE 33 FEDERAL E #1**

**Page 4**

C. Flora and Fauna

The location is in an area sparsely covered with mesquite and range grasses.

D. Ponds and Streams

There are no rivers, lakes, ponds, or streams in the area.

E. Residences and Other Structures

There are no residences within a mile of the proposed well site.

F. Archaeological, Historical, and Cultural Sites

None observed on this area.

G. Land Use

Grazing

H. Surface Ownership

BLM (USA)

11. OPERATOR'S REPRESENTATIVE

H. R. Willis  
3300 North "A" Street, Bldg 2, Suite 120  
Midland, Texas 79705  
Office: (432) 686-8235  
Home: (432) 697-2484

12. CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Nearburg Producing Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

10.6.05  
Date

H. R. Willis  
H. R. Willis  
Drilling Manager

**HYDROGEN SULFIDE DRILLING OPERATIONS PLANS  
NEARBURG PRODUCING COMPANY  
RED LAKE 33 FEDERAL E #1**

**1. HYDROGEN SULFIDE TRAINING**

- A. All regularly assigned personnel, contracted or employed by Nearburg Producing Company, will receive training from a qualified instructor in the following areas prior to commencing drilling potential hydrogen sulfide bearing formations in this well:
  - 1. The hazards and characteristics of hydrogen sulfide (H<sub>2</sub>S).
  - 2. The proper use and maintenance of personal protective equipment and life support systems.
  - 3. The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing areas, evacuation procedures and prevailing winds.
  - 4. The proper techniques for first aid and rescue procedures.
- B. In addition, supervisory personnel will be trained in the following areas:
  - 1. The effects of H<sub>2</sub>S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
  - 2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
  - 3. The contents and requirements of the H<sub>2</sub>S Drilling Operations Plan.
- C. There will be an initial training session just prior to encountering a known or probable H<sub>2</sub>S zone (within 3 days or 500 feet) and weekly H<sub>2</sub>S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H<sub>2</sub>S Drilling Operations Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

## **HYDROGEN SULFIDE DRILLING OPERATIONS PLANS**

### **PAGE 2**

#### **2. H2S SAFETY EQUIPMENT AND SYSTEMS**

Note: All H2S safety equipment and systems will be installed, tested and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H2S.

##### **A. Well Control Equipment:**

1. Flare line with continuous pilot.
2. Choke manifold with a minimum of one remote choke.
3. Blind rams and pipe rams to accommodate all sizes with properly sized closing unit.
4. Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head and flare gun with flares as needed.

##### **B. Protective Equipment for Essential Personnel:**

Mark II Surviveair 30-minute units located in the dog house and at briefing areas, as indicated on well site diagram.

##### **C. H2S Detection and Monitoring Equipment:**

1. Two portable H2S monitors positioned and location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 ppm are reached.
2. One portable SO2 monitor positioned near flare line.

##### **D. Visual Warning systems:**

1. Wind direction indicators as shown on well site diagram.
2. Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used when appropriate. See example attached.

## **HYDROGEN SULFIDE DRILLING OPERATIONS PLANS**

### **PAGE 3**

#### **E. Mud Program**

1. The Mud Program has been designed to minimize the volume of H<sub>2</sub>S circulated to the surface. Proper mud weights, safe drilling practices and the use of H<sub>2</sub>S scavengers will minimize hazards when penetrating H<sub>2</sub>S bearing zones.
2. A mud-gas separator will be utilized as needed.

#### **F. Metallurgy**

All drill strings, casing, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and line and valves shall be suitable for H<sub>2</sub>S service.

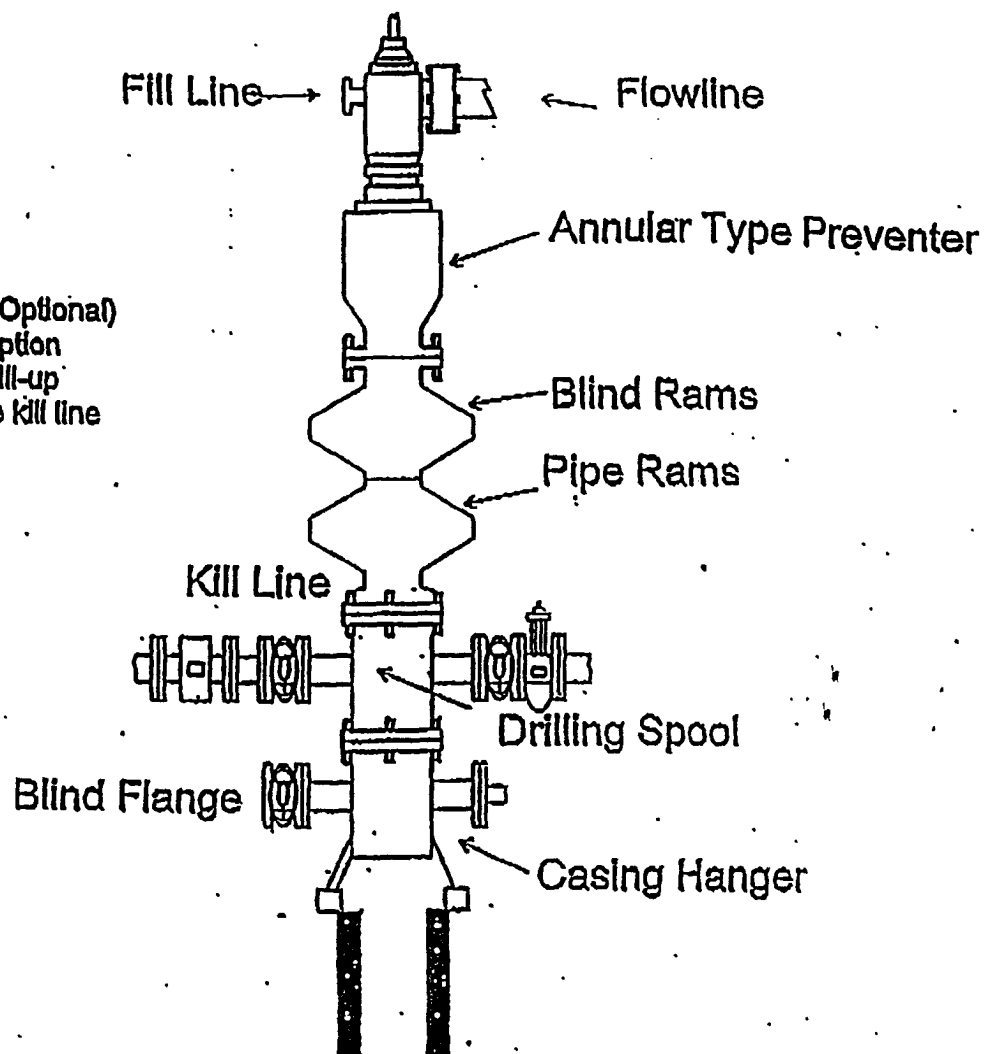
#### **G. Communication**

1. Cellular telephone communications in company vehicles and mud logging trailer.
2. Land line (telephone) communications at area office.

#### **H. Well Testing**

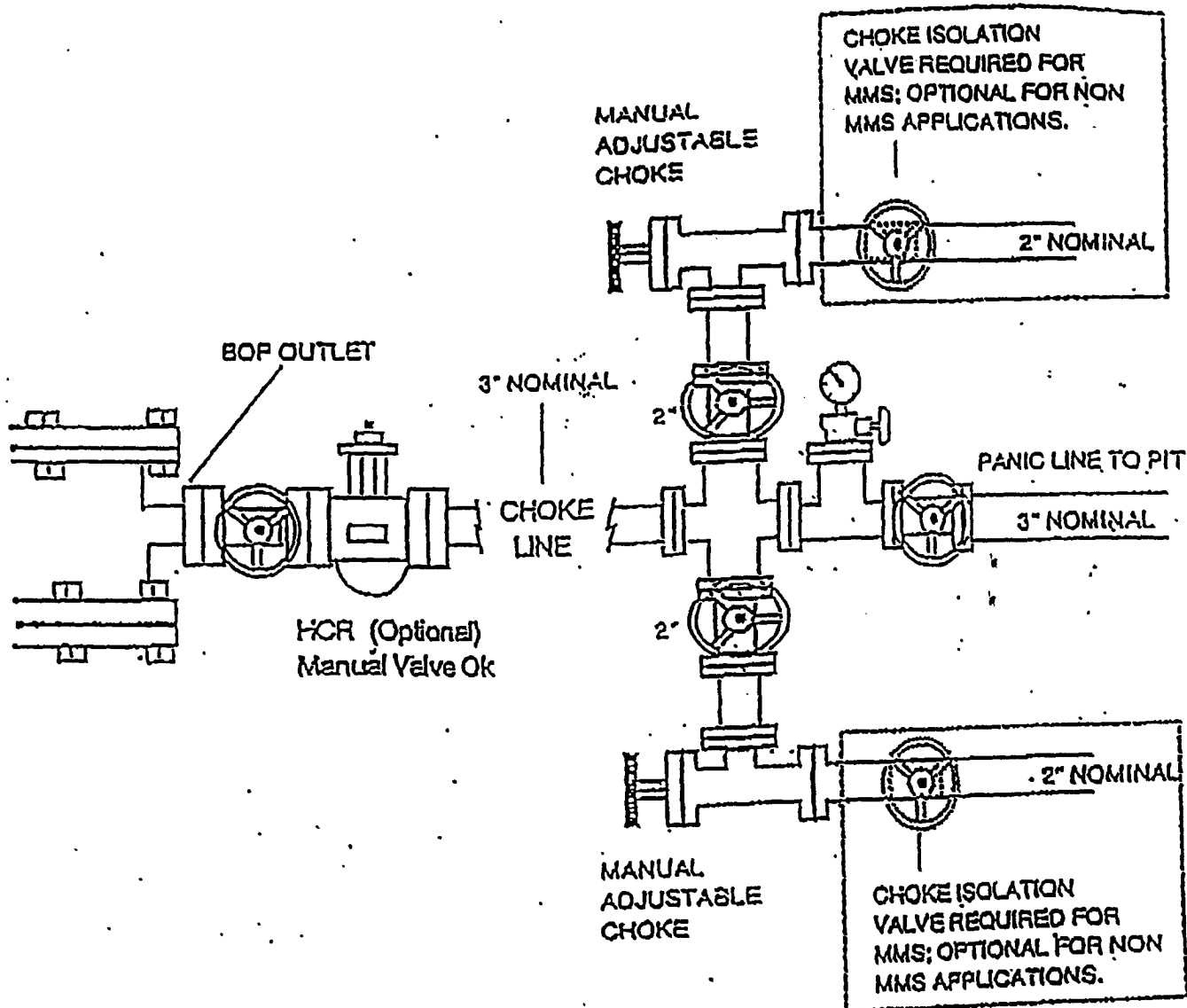
Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safely and adequately conduct the test. The drill stem testing in an H<sub>2</sub>S environment will be conducted during the daylight hours.

Rotating Head (Optional)  
Drilling Nipple option  
must include a fill-up  
line. Do not use kill line  
for fill up.



1500 Series

**CHOKE MANIFOLD  
5M SERVICE**



## CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Nearburg Producing Company  
Well Name & No. Red Lake 33 Federal E #1  
Location: 1650' FNL, 900' FWL, Section 33, T.. 17 S., R. 27 E., Eddy County, New Mexico  
Lease: LC-026874-F

### I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County in sufficient time for a representative to witness:

A. Well spud

B. Cementing casing: 8-5/8 inch 5-1/2 inch

C. BOP tests

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

3. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15-day time frame.

4. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

### II. CASING:

1. The 8-5/8 inch surface casing shall be set at approximately 1200 feet and cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.

2. The minimum required fill of cement behind the 5-1/2 inch production casing is to reach at least 500 feet above the top of the uppermost hydrocarbon producing interval.

### III. PRESSURE CONTROL:

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 8-5/8 inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 2000 psi.

3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.

- The tests shall be done by an independent service company.
- The results of the test shall be reported to the appropriate BLM office.
- Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
- Testing must be done in a safe workman-like manner. Hard line connections shall be required.

**Nearburg Producing Company**

Exploration and Production  
3300 North "A" Street  
Building 2, Suite 120  
Midland, Texas 79705  
432/686-8235  
FAX: 432/686-7806

RECEIVED  
AUG 31 2005  
OUD-ARTESIA

August 30, 2005

NM Oil Conservation Division  
1301 W. Grand Ave  
Artesia, NM 88210

Ref: Red Lake 33 Federal #1  
990 FNL and 990 FWL  
Sec 33, 17S, 27E  
Eddy County, New Mexico

Sirs:

This is a new drill to the Yeso formation. We do not anticipate encountering H2S and fill no contingency plan is needed. Nearburg will have proper equipment on location in case H2S is encountered.

If you have any questions or need further information, please call me at the letterhead number.

Sincerely,



Sarah Jordan  
Production Analyst

/sj



PREPARED FOR:

Mr. Butch Willis  
**NEARBURG PRODUCING COMPANY**  
Midland, Texas

**Red Lake 33 Federal # 1**  
Section 33  
T-17-S  
R-27-E  
Eddy County, New Mexico

Prepared by:  
Randy Auburg  
August 30, 2005

## DRILLING FLUID SYNOPSIS

NEARBURG PRODUCING COMPANY  
RED LAKE 33 Federal # 1

Section 33  
T-17-S  
R-27-E  
Eddy County, New Mexico

### Recommended Casing

8 5/8" at 1,300'  
TD at 3,700'

DEPTH	MUD WEIGHT	VISCOSITY	FLUID LOSS	DRILL SOLIDS	COMMENTS
0-1,300'	8.6 to 9.0	32 to 33	No Control	<5%	Spud Mud
1,300'-3,700'	8.8 to 9.0	28 to 29	NC-<20cc	<5%	Cut Brine, Paper, Lime, Starch, Star NP-110

## ESTIMATED FORMATION TOPS

QUEEN	865'
GRAYBURG	1,290'
SAN ANDRES	1,600'
GLORIETA	2,800'
YESO	2,900'
TD	3,700'

## RECOMMENDED CASING PROGRAM

8 5/8" at 1,300'

TD at 3,700'

## RECOMMENDED DRILLING FLUID PROGRAM

<u>DEPTH</u>	<u>WEIGHT</u>	<u>VISCOSITY</u>	<u>FILTRATE</u>
0-1,300'	8.6-9.0	32-33	No Control

Spud with an Amgel and Lime spud mud, circulating the working pits. Use Paper for seepage control and for sweeps. Use additions of Fresh Water to control weight and viscosity. There is a potential for lost returns in this interval. If lost returns are encountered and circulation cannot be regained after pumping several viscous LCM pills, you should consider dry drilling to casing point. We recommend periodically pumping a viscous LCM sweep while dry drilling in order to prevent solid accumulation in the well bore.

**Southwestern E & P Company's, No Bluff State # 1, Section 36, T-17-S, R-27-E, reported lost circulation at 329' while drilling with an 8.4 ppg fluid weight.**

<u>DEPTH</u>	<u>WEIGHT</u>	<u>VISCOSITY</u>	<u>FILTRATE</u>
1,300'-3,700'	8.8-9.0	28-33	NC-<20cc

Drill out from surface casing with Cut Brine, circulating the reserve. Use Paper to control seepage and for sweeps. Maintain a 9.0 to 9.5 pH with Lime. Use Star NP-110 for sweeps and for solids control. If abnormal pressures are encountered, we recommend additions of Brine as needed to control. H<sub>2</sub>S may be present in this interval. If H<sub>2</sub>S is encountered, we recommend using a H<sub>2</sub>S scavenger for personnel safety and a filming amine to protect the Drill String.

At 3,600' or prior to evaluation, return to the working pits and mud up with a **Starch/Star NP-110** type system. Maintain an API fluid loss of less than 20cc and funnel viscosity of 31 to 33 sec/1000cc with Starch. Use Xanthan Gum if additional viscosity is required. If lost circulation is encountered in this interval, please refer to Lone Star Mud's lost circulation procedure.

**Estimated Drilling Fluid Cost: \$3,500.00 to \$4,500.00**

**Estimated Drilling Days: 6 to 7**

**Estimates are based on a 600 bbl system and do not include lost circulation, water flows, abnormal pressures, or multiple DST's.**

## **AMBAR LONE STAR FLUID SERVICES LOST CIRCULATION PROCEDURES**

Loss of circulation is a possibility on this well. Although each well is different, there are some basic procedures and drilling practices that can aid in reducing the severity or, in some cases, prevent lost circulation. Below is a list, which may prove helpful.

1. Maintain viscosities as low as possible and still clean the hole. We recommend a viscosity of 28 to 33 on this well.
2. Maintain mud weights as low as possible without jeopardizing safety.
3. Use slow trip speeds to prevent swabbing and surging.
4. Break circulation in stages with reduced pump strokes while tripping in the hole.
5. Rotate pipe prior to and while tripping in the hole.
6. Use an optimum hydraulics program.

Severe seepage to total loss of circulation may occur even when the above procedures are followed. For severe seepage, we recommend circulating pills (50-100 bbls. depending on hole size) containing 10-30 ppb of various (fibrous and flake) lost circulation material. It would be helpful to reduce pump rates until full returns are established. Once full returns are regained, normal pump rates should be returned to in stages. The inclusion of lost circulation material in the entire system is recommended only if the above procedures do not adequately seal off the loss zone.

For total loss of circulation, we recommend pulling enough stands to place the bit above the loss zone. A viscous pill containing the appropriate type of loss circulation material should be spotted. The size of the pill should be determined by hole size and should contain at least 30 ppb lost circulation material. Several attempts should be made before considering other alternatives. After returns are regained, we recommend staging back to bottom using the procedure outlined above.

If returns are not fully re-established, consideration should be given to dry drilling while pumping periodic sweeps to ensure hole cleaning.

**Nearburg Producing Company**

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432/686-8235  
FAX: 432/686-7806

~~August 30, 2005~~ 10605

NM Oil Conservation Division  
1301 W. Grand Ave  
Artesia, NM 88210

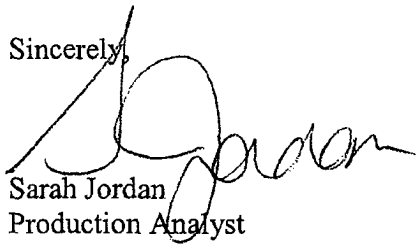
Ref: Red Lake 33 Federal E #1  
1650 FNL and 900 FWL  
Sec 33, 17S, 27E  
Eddy County, New Mexico

Sirs:

This is a new drill to the Yeso formation. We do not anticipate encountering H2S and fill no contingency plan is needed. Nearburg will have proper equipment on location in case H2S is encountered.

If you have any questions or need further information, please call me at the letterhead number.

Sincerely,



Sarah Jordan  
Production Analyst

/sj