

F-00-48  
3/20/06

# OCD-HOBBS

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

5. Lease Serial No.  
LC 032573B

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.  
Elliott B Federal #14

9. API Well No.

30-025-37867

10. Field and Pool, or Exploratory

Eunice San Andres Southwest

11. Sec., T. R. M. or Blk. and Survey or Area

Sec. 7, T22S, R37E, N.M.P.M.

12. County or Parish  
Lea

13. State  
NM

1a. Type of work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator  
Range Operating New Mexico, Inc.

3a. Address 777 Main St., Ste. 800  
Fort Worth, TX 76102

3b. Phone No. (include area code)  
817-810-1916

4. Location of Well (Report location clearly and in accordance with any State requirements.)

At surface 330' FNL & 660' FEL

At proposed prod. zone 330' FNL & 660' FEL

14. Distance in miles and direction from nearest town or post office\*  
2 miles SE from Eunice, NM

15. Distance from proposed\*  
location to nearest  
property or lease line, ft.  
(Also to nearest drig. unit line, if any)

16. No. of acres in lease  
360

17. Spacing Unit dedicated to this well

40

18. Distance from proposed location\*  
to nearest well, drilling, completed,  
applied for, on this lease, ft.

19. Proposed Depth  
4500

20. BLM/BIA Bond No. on file  
NM2399

21. Elevations (Show whether DF, KDB, RT, GL., etc.)  
3433

22. Approximate date work will start\*  
04/01/2006

23. Estimated duration  
9 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)  
Paula Hale

Date  
03/17/2006

Title

Sr. Reg. Sp.

Approved by (Signature)

/s/ Tony J. Herrell

Name (Printed/Typed)

/s/ Tony J. Herrell

Date MAY 12 2006

Title

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)

Witness Surface Casing

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

United State Department of the Interior

Bureau of Land Management

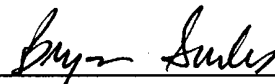
ROSWELL FIELD OFFICE  
2902 West Second Street  
Roswell, New Mexico 88201

Statement Accepting Responsibility for Operations

Operator Name: Range Operating New Mexico, Inc.  
Street or Box: 777 Main Street, Suite 800  
City, State: Fort Worth, TX  
Zip Code: 76102

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

Lease No.: LC 032573B  
Legal Description of Land: Sec. 7, T22S, R37E  
NE/4 NE/4  
Formations: Eunice San Andres Southwest  
Bond Coverage: (State, Nationwide or Individual) Statewide  
BLM Bond File No.: NM2399

Authorized Signature: 

Title: Petroleum Engineer

Date: 3/17/06

## NOTICE TO SURFACE OWNER

### Surface Owner

Range Operating New Mexico, Inc.  
777 Main St., Ste. 800  
Fort Worth, TX 76102

### Notice Date

3-17-06

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

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

State of New Mexico  
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION  
1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

Form C-102  
Revised October 12, 2005  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number <b>30-025-37867</b>	Pool Code 24180	Pool Name Eunice San Andres Southwest
Property Code 301545	Property Name <b>ELLIOTT "B" FEDERAL</b>	Well Number 14
OGRID No. 227588	Operator Name <b>RANGE OPERATING NEW MEXICO, INC.</b>	Elevation 3433'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	7	22-S	37-E		330	NORTH	660	EAST	LEA

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

LOT 1									
36.96 AC									
LOT 2									
36.98 AC									
LOT 3									
36.98 AC									
LOT 4									
37.00 AC									

3435.7' 3434.0' 3438.1' 3432.2'

600' 330' 660'

GEODETIC COORDINATES  
NAD 27 NME

Y=515674.2 N  
X=851194.5 E

LAT.=32°24'45.23" N  
LONG.=103°11'43.21" W

**OPERATOR CERTIFICATION**

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

*Paula Hale* 3-17-06  
Signature Date

**Paula Hale**  
Printed Name

Sr. Reg. Sp.

**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.

JANUARY 27, 2006

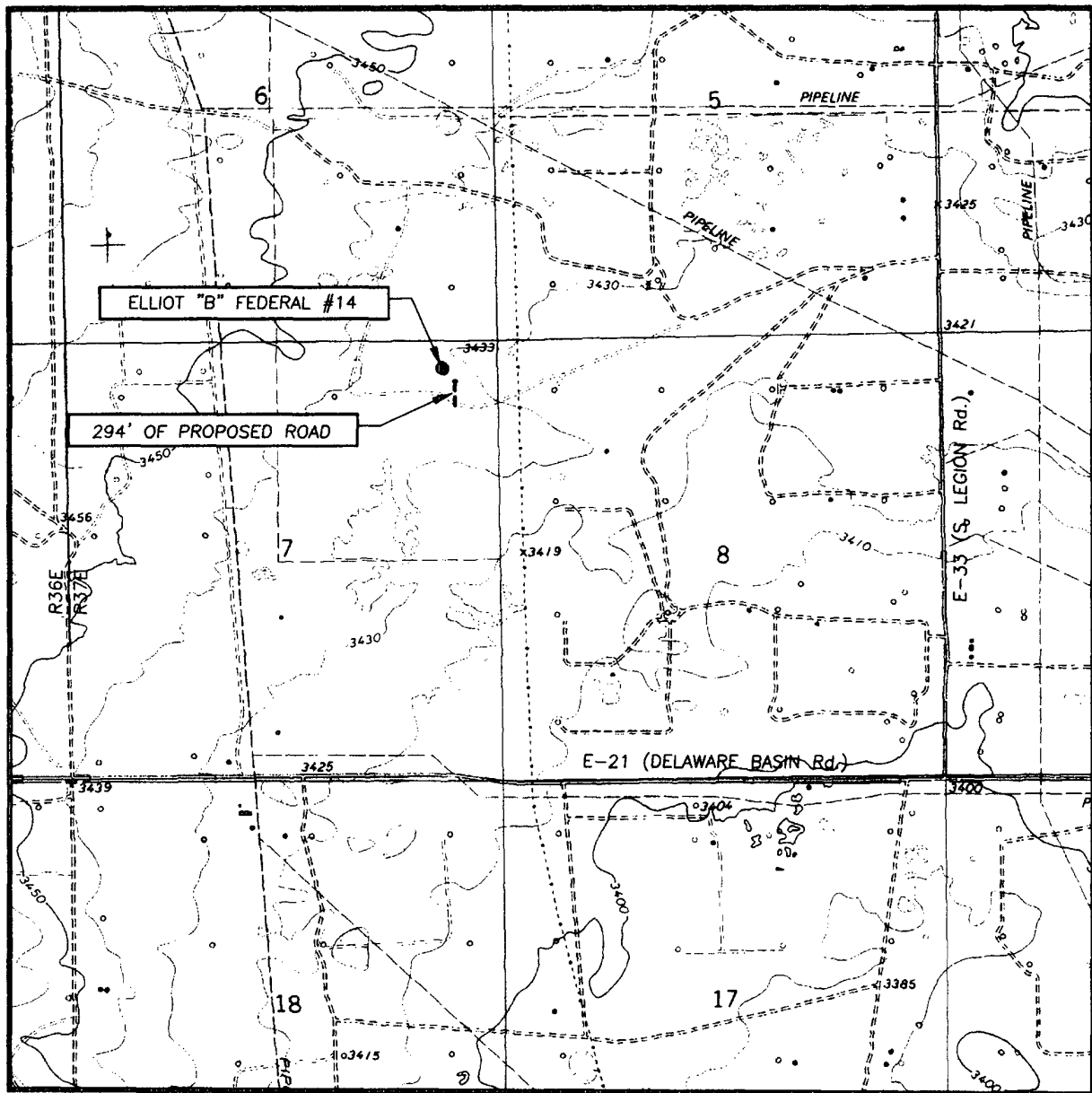
Date Surveyed DSR

Signature & Seal of Professional Surveyor

*Gary G. Olson* 2/6/06  
06.71.0222

Certificate No. GARY OLSON 12641

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:  
EUNICE, N.M. - 10'

SEC. 7 TWP. 22-S RGE. 37-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 330' FNL & 660' FEL

ELEVATION 3433'

OPERATOR RANGE OPERATING  
NEW MEXICO Inc.

LEASE ELLIOTT "B" FEDERAL

U.S.G.S. TOPOGRAPHIC MAP  
EUNICE, N.M.

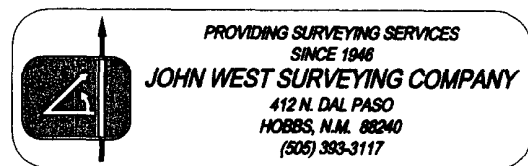
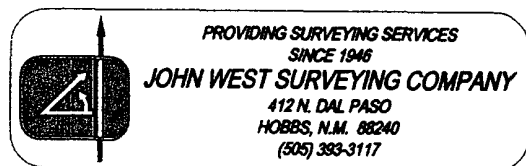


EXHIBIT A

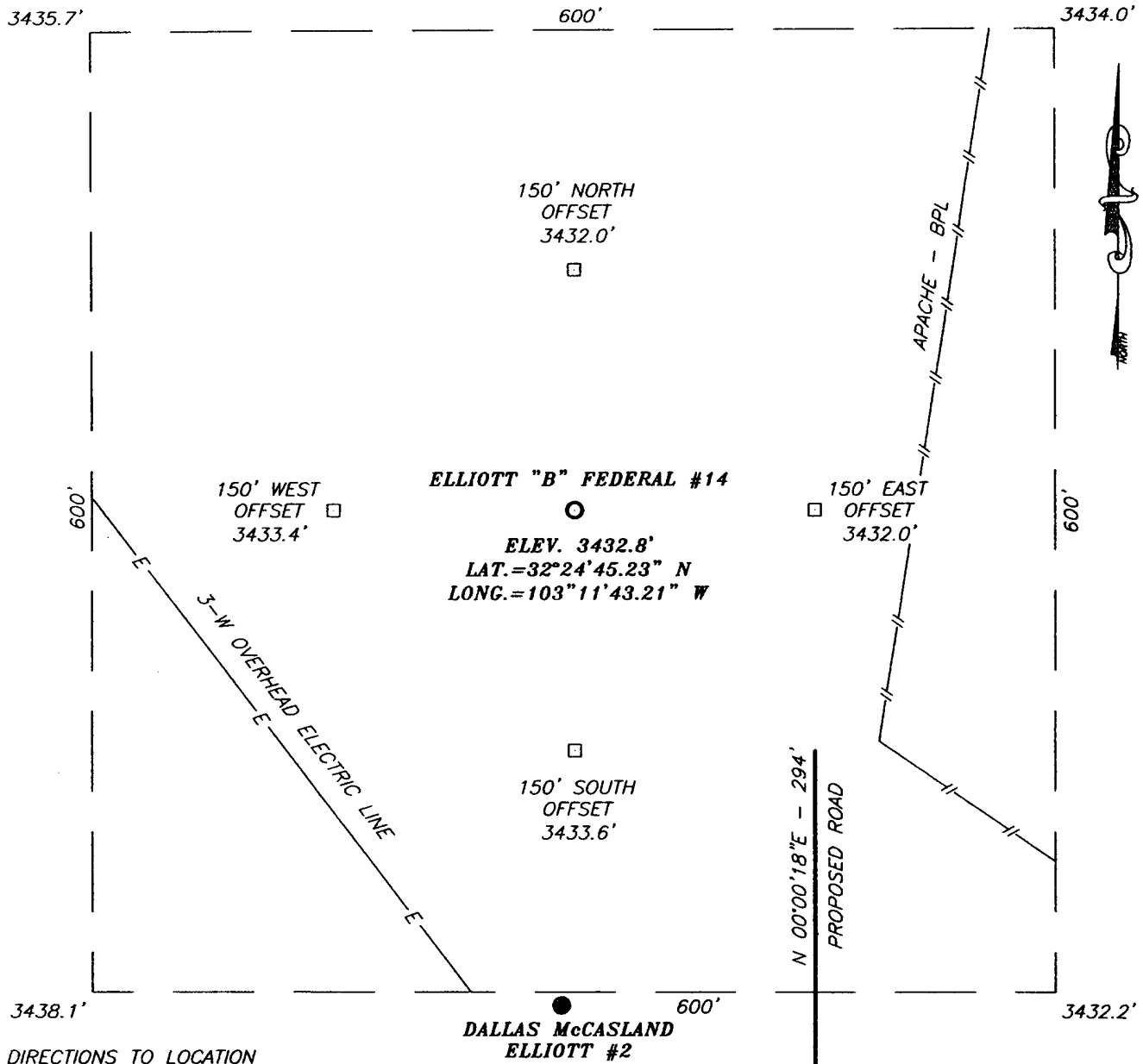
The map displays a section grid with various geographical and administrative features. Key elements include:

- Section Grid:** A 6x6 grid of sections, with some sections numbered 1 through 36.
- Township and Range:** Townships T. 21 S. and T. 22 S. are indicated. Ranges R. 36 E. and R. 37 E. are also shown.
- Roads:** Major roads include N. Turner, Hill, Curry, Jones City, and Private Rd. Other roads shown are ST. 176, ST. 8, ST. 234, ST. 18, and ST. 207.
- Landmarks:** The EUNICE MUNICIPAL RECREATION AREA and COYOTE HILL are labeled. The EUNICE CITY LIMITS are also indicated.
- Well Location:** A specific well location is marked with a dot and labeled "ELLIOT 'B' FEDERAL #14".
- Other Features:** The map includes various other labels such as "OIL CENTER", "KILY", "WEAVER", "S. LEGION", "DELAWARE BASIN", "KING", "SUMMIT P.R.", and "DRINKARD".

SEC. 7 TWP. 22-S RGE. 37-E  
SURVEY \_\_\_\_\_ N.M.P.M. \_\_\_\_\_  
COUNTY LEA STATE NEW MEXICO  
DESCRIPTION 330' FNL & 660' FEL  
ELEVATION 3433'  
RANGE OPERATING  
OPERATOR NEW MEXICO, Inc.  
LEASE ELLIOTT "B" FEDERAL

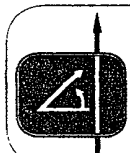
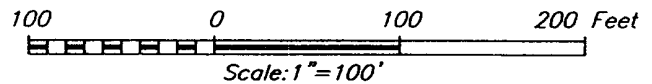


**SECTION 7, TOWNSHIP 22 SOUTH, RANGE 37 EAST, N.M.P.M.,**  
 LEA COUNTY, NEW MEXICO



**DIRECTIONS TO LOCATION**

FROM THE INTERSECTION ST. HWY 207 AND CO. RD. E-21 (DELAWARE BASIN RD.), 3.0 MILES SOUTH OF EUNICE. GO WEST ALONG CO. RD. E-21 APPROX. 1.0 MILES. TURN RIGHT ON CO. RD. E-33 (S. LEGION Rd.) AND GO NORTH 1.2 MILES TO A LEASE ROAD. TURN LEFT AND GO WEST-SOUTHWEST 0.16 MILES TO A "Y" IN ROAD, TAKE THE RIGHT FORK AND CONTINUE ALONG MEANDERING LEASE ROAD APPROXIMATELY 1.04 MILES. THIS LOCATION IS APPROXIMATELY 294' NORTH.



PROVIDING SURVEYING SERVICES  
 SINCE 1946  
**JOHN WEST SURVEYING COMPANY**  
 412 N. DAL PASO  
 HOBBS, N.M. 88240  
 (505) 393-3117

RANGE OPERATING NEW MEXICO, Inc.			
ELLIOTT "B" FEDERAL #14 WELL LOCATED 330 FEET FROM THE NORTH LINE AND 660 FEET FROM THE EAST LINE OF SECTION 7, TOWNSHIP 22 SOUTH, RANGE 37 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.			
Survey Date: 01/27/06	Sheet 1 of 1 Sheets		
W.O. Number: 06.11.0222	Dr By: D.S.R.	Rev 1:N/A	
Date: 01/27/06	Disk: CD#1	06110222	Scale: 1"=100'

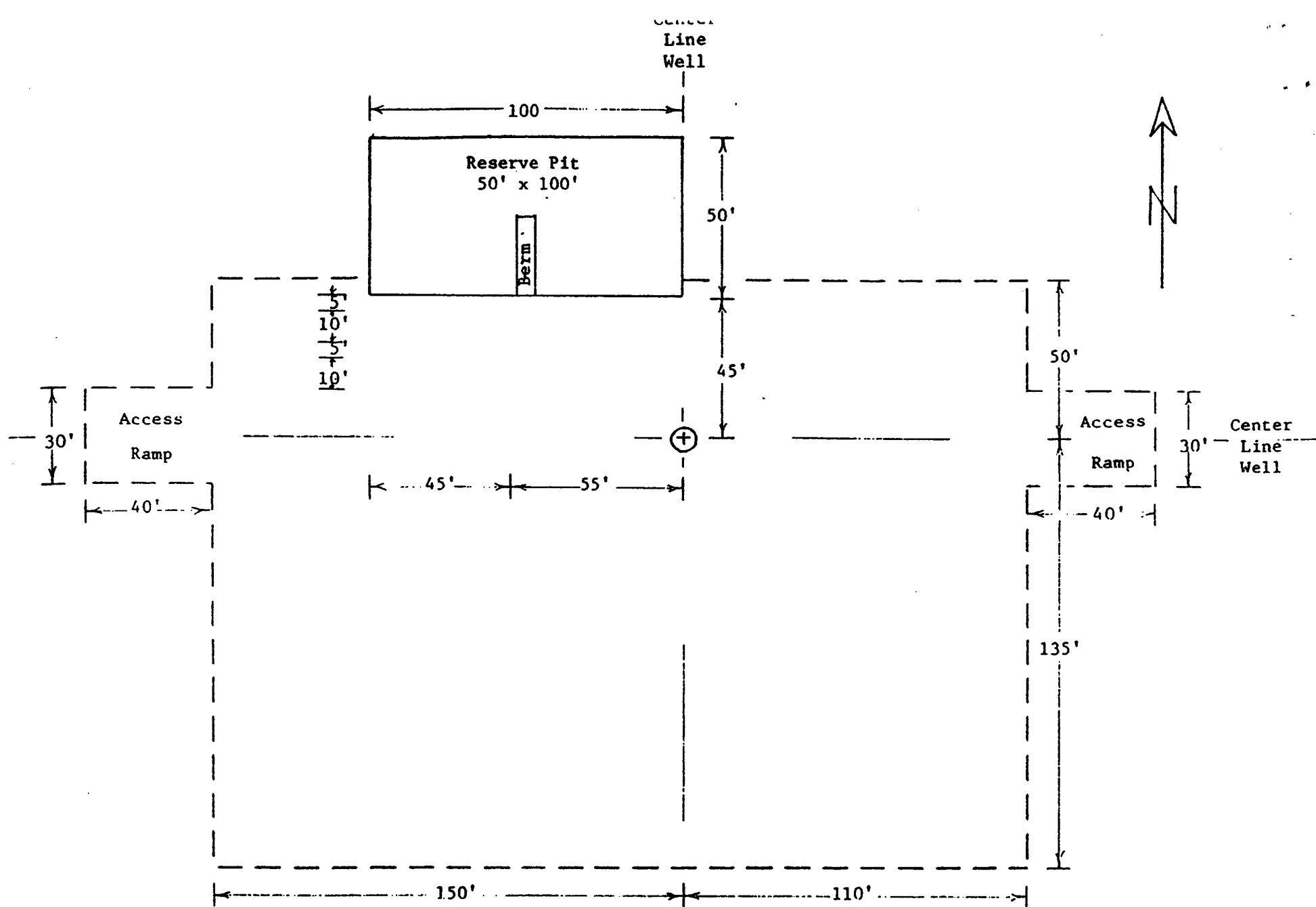


EXHIBIT C

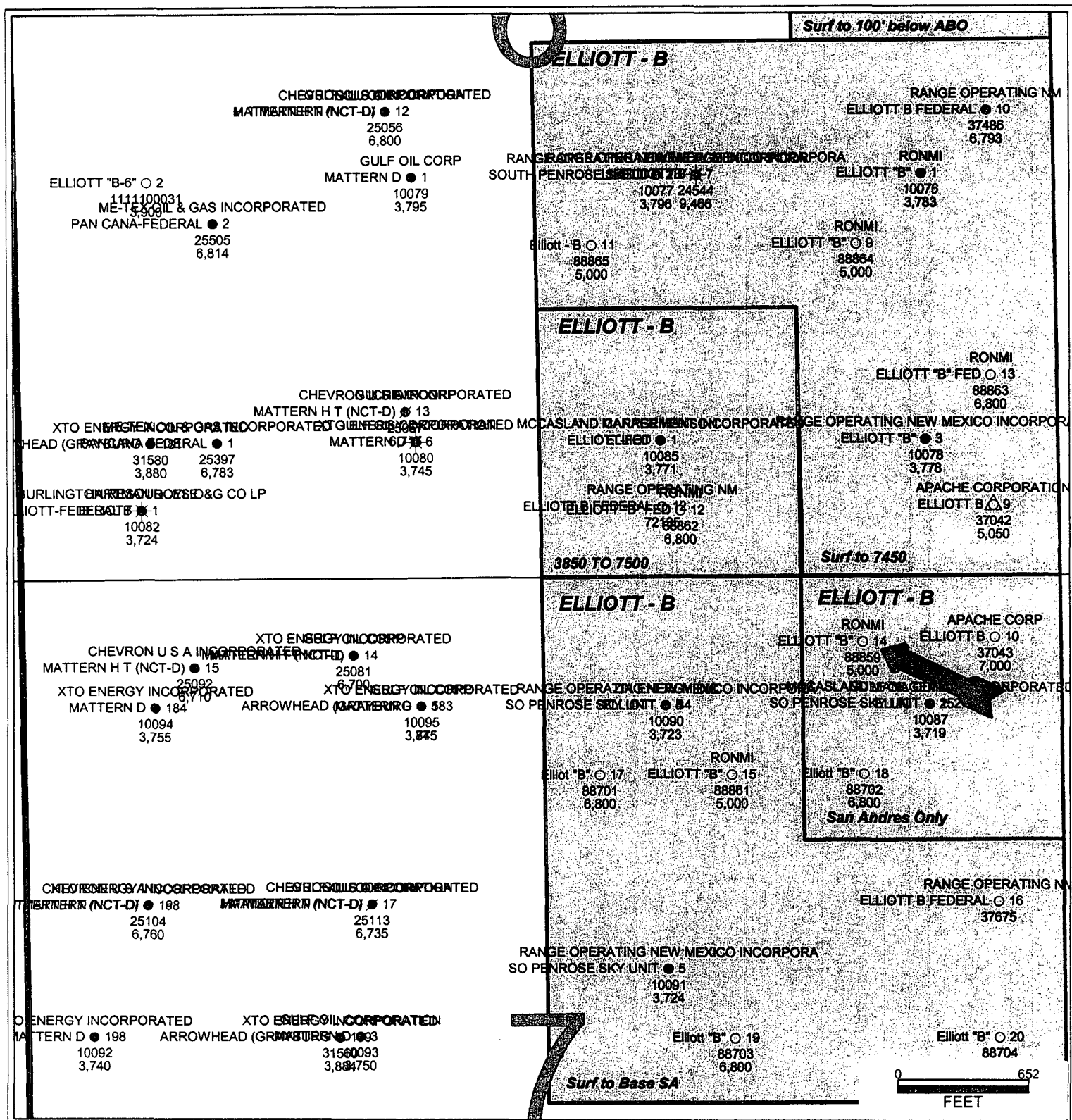
UNITED DRILLING, INC

LOCATION PLAT

RIG 24

Scale: 1"=40'



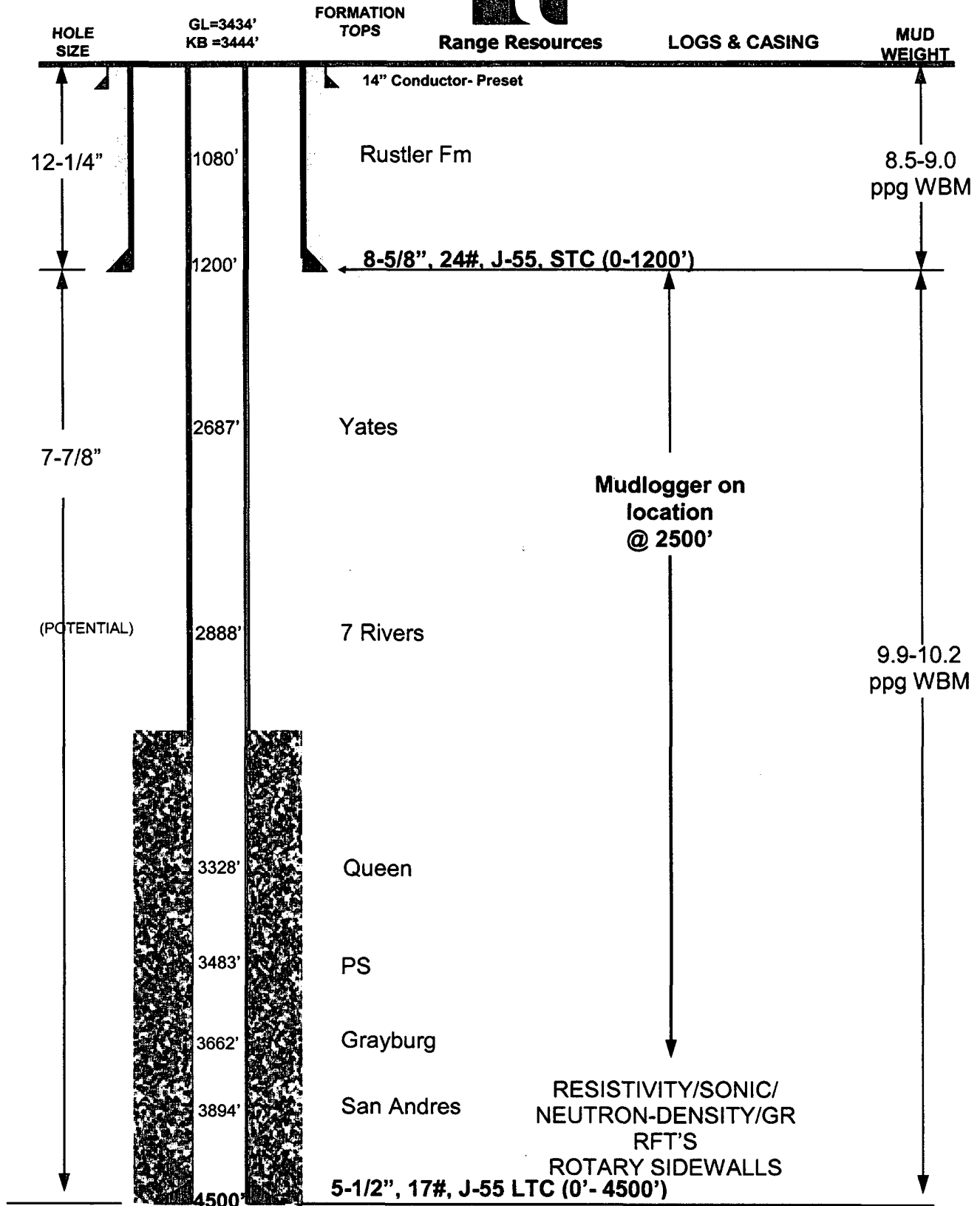


PETRA 3/17/2006 10:00:12 AM

EXHIBIT D

WELL : Elliott B Federal #14  
SL : 330' FNL & 660' FEL, Sec 7-T22S-R37E  
COUNTY : Lea County  
STATE : New Mexico

FIELD: Eunice San Andres SW  
OBJECTIVE TD: 4500'





Range Operating New Mexico  
**Elliott B Federal #14**  
**Lea County, NM**  
**Drilling Program**  
Prepared 3/17/06

**PROPOSED DEPTH:** 4,500' MD / 4,500' TVD  
**GROUND ELEVATION:** 3,433'  
**KB:** 17'

**LOCATION:** 330' FNL & 660' FEL, Section 7-T22S-R37E, Lea County, NM

**ANTICIPATED PRODUCTIVE FORMATION:** San Andres

**API NO:**

**GENERAL:**

The Elliott B Federal #14 will be a 4,500' San Andres test in Lea County, New Mexico drilled on a daywork basis by United Rig #24. An 12-1/4" surface hole will be drilled to +/-1200'. A string of 8-5/8" casing will be run and cemented to surface.

Nipple up BOPs and test same, drilling will continue with a 7-7/8" hole to a total depth of 4,500'. Actual TD will be spaced so that casing will be landed where the casing head can be screwed on. After electric-logging the open-hole interval, a string of 5-1/2" casing will be run and cemented from total depth to 1,000' and the tubing head installed.

**ESTIMATED FORMATION TOPS: (Log Depths)**

Upper Permian Rustler Fm	+2370 ft	1080 ft MD	
Upper Permian Yates Fm	+763 ft	2687 ft MD	
Upper Permian 7 Rivers Fm	+562 ft	2888 ft MD	
Upper Permian Queen Fm	+122 ft	3328 ft MD	
Upper Permian PS Fm	-33 ft	3483 ft MD	+
Upper Permian Grayburg Fm	-212 ft	3662 ft MD	+
Upper Permian San Andres Fm	-444 ft	3894 ft MD	*
PTD	-1050 ft	4500 ft MD	

\*= Primary Reservoir Targets

+ = Secondary Reservoir Targets

## **DETAILED DRILLING PROCEDURE**

### **TIMES AND EVENTS TO NOTE ON DRILLING REPORT:**

- A. SPUD (date and time)
- B. TD (each interval date and time)
- C. CEMENT IN PLACE (date and time)
- D. RIG RELEASE (date and time)

## **BOTTOM HOLE ASSEMBLIES**

BHA #1: (0-1200') - Bit, (2) 8" DC, (10) 6.25" DC's

BHA #2: (1200'-4500') - Bit, (24) 6.25" DC's

## **USE OF RT TOOL**

No RT tools in use.

## **MUD PROGRAM**

INTERVAL	MUD WEIGHT	FUNNEL VIS.	API Fluid Loss
0' - 1200'	8.4 – 9.4	32-34	NC
1200' - 4500'	10.0	28	NC

- 1) Level and build an all-weather location and access road.
- 2) MIRU United Rig #24. Perform rig safety inspection and ensure that everything is in proper working order prior to spudding well.
- 3) Notify NMOCD of intent to spud, run casing and cement each 24 hours in advance 505-748-1283.
- 4) Spud well with 12-1/4" mill tooth bit. Drill to +/- 1200' with surveys at 500' and 1000' (Actual depth will be determined by the length of the casing). Circulate hole clean. Sweep and condition hole to run casing. Pull out of hole, lay down BHA.

**NOTE:** Mud through this interval will be a native spud mud supplemented with Bentonite. Lime may be used to flocculate the mud and increase the yield point to clean the hole. Mix paper for seepage control. Utilize all solids control equipment to control drill solids. Run as fine of mesh shaker screens as possible. Use water to control mud weight and viscosity. Maintain mud weight at 8.4 – 9.0 ppg.

5) Rig up casing crew and run 8-5/8", 24#, J-55 casing as follows:

1-8-5/8" Texas Pattern Shoe  
1-8-5/8" Insert Float Collar  
1-8-5/8" x 11" Centralizer 10' above shoe  
1-8-5/8" x 11" Centralizer every other joint  
1-8-5/8" Stop Ring

6) Circulate for at least bottoms up plus one casing volume with mud prior to cementing. Cement surface casing according to cement recommendation. **NOTE:** Have field bin, cement, and circulating equipment on location prior to casing job.

- a) Review rates, pressures, displacement volumes and casing pressure rating with Service Company and rig personnel. All cement slurries are to be lab tested; both a pilot test and a test of the actual field blend. Report results, including 24 hour compressive strengths, to the office. **(See Cement Testing Requirements below)**. Also keep two samples of each dry cement in the event that a problem is encountered while cementing. Discard this sample if all indications are positive.
- b) Cement well as follows: Pump 20 bbl fresh water followed by **200** sks of Lead: 35/65 POZ: Class C + 6% D020 + 5% (BWOW) D044 + 1 pps D130, @ 12.8 ppg, followed by **180** sks Tail: Class C + 1% S001 + 0.1 pps D130 @ 14.8 ppg. Displace with fresh water, bump plug with w/ 500 psi over final pump pressure.
- c) If cement is not circulated to surface, contact the office and the NMOCD and prepare to run 1" pipe and top out cement. Have 1" pipe on location for possible top-out.
- d) If cement falls, fill 12-1/4" X 8-5/8" annulus with cement.

7) Release pressure and check for flow back. Set casing on bottom. If float is holding, base nipple up of wellhead and BOP on the surface cement samples. Well must stand at least 8 hours total before any testing of casing is performed as per NMOCD.

8) After cementing casing, weld on 8-5/8" flange type casing head. Test BOP blind rams & choke manifold to 250# low & 3000# high. Pick up Bit #2 (7-7/8") & BHA, trip in hole, test BOP pipe rams to 250# low & 3000#. **Pressure test casing to 1000 psi for 30 minutes prior to drilling out shoe.** Clearly report this test information of the daily drilling report.

**MUD NOTES: See Mud Program for details**

After cementing 8-5/8" casing circ pit with brine water. Mix paper for seepage control. Utilize pre-hydrated Gel/Lime sweeps for flushing the hole. Run all available solids control equipment to control weight. Add brine water as needed to maintain volume. Add LCM to system only as needed. Use batch LCM treatment if losses occur and maintain as needed.

9) Drill ahead with brine water in 7-7/8" hole taking deviation surveys every  $\pm 500'$  or nearest bit run per NMOCD rules. Use sweeps as needed to clean hole. Drill to  $\pm 4500'$ ; exact TD will be determined by the length of the casing. Sweep and condition hole in preparation for logging. Spot a 50 bbl, 40-42 visc pill prior to POOH for logs. Strap out of hole.

10) RU Wireline Truck and Tools. Log well as instructed by Range Operating NM. Rotary sidewall cores may be required along with RFT's.

- 11) Make a conditioning trip prior to running casing. Trip into hole with BHA and drill pipe, break circulation at 4500'. Ream last two stands to bottom. Circulate and condition hole. Maintain viscosity of 28. TOH laying down 4-1/2" drill pipe and drill collars. Clear floor and prepare to run casing.
- 12) Rig up casing crew and run 5-1/2", 17#, J-55, LT&C as follows:
  - a) Float shoe (thread-lock)
  - b) 1 jt. 5-1/2", 17#, J-55, LT&C casing (thread-lock)
  - c) Float collar (thread-lock)
  - d) 5-1/2", 17#, J-55, LT&C Casing to surface.

The two bottom joints of 5-1/2" casing and the float shoe and float collar should be thread-locked (do not weld pipe). Run 1 centralizer 5' above shoe with limit clamp, one on the next collar, one just below the float collar with limit clamp and one per joint up to 3300'.
- 13) Circulate mud for at least bottoms up plus one casing volume prior to cementing.
- 14) Cement the production casing as follows. Re-figure cement volumes on a basis of: caliper + 20% + 50 sx. Precede cement with 20 bbl fresh water, 500 gals superflush, 20 bbl fresh water.

**Lead (3,500' to 1,000'):**

450 sacks

Slurry: 35:65 Poz : Class C + 6% D20 + 5% D44 + 0.3% S1 + 4 pps D42 + 0.1 pps D130

Slurry Weight: 12.5 ppg                      Slurry Yield: 2.16 cuft/sk                      Water: 11.6 gals/sk

**Tail (4,500' to 3,500'):**

250 sacks

Slurry: 50:50 Poz : Class C + 2% D20 + 5% D44

Slurry Weight: 14.2 ppg                      Slurry Yield: 1.36 cuft/sk                      Water: 6.33 gals/sk

Review rates, pressures, displacement volumes and casing pressure rating with Service Company and rig personnel. All cement slurries are to be lab tested; both a pilot test and a test of the actual field blend. Report results, including 24 hour compressive strengths, to the office. **(See Cement Testing Requirements below)**. Also keep two samples of each dry cement.

- a) Have additional water storage on location as necessary for mixing cement. Have water analyzed by cementing company for compatibility with cement and chemicals.
- b) Reciprocate pipe during cement job. Take special care to move pipe very slowly on the down stroke. Pump spacer and cement at 7-8 BPM. When the last cement has been pumped, maintain rate at 7-8 BPM. Displace with fresh water. When reaching displacement to shoe joint minus 10 bbls slow pump rate to 2 barrels per minute or less prior to bumping plug. Bump plug with 500 psi over final displacement pressure and hold pressure for 15 minutes.
- 15) Release pressure and check for flow back. If floats are holding, continue to make preparations to hang 5-1/2" casing one (1) foot off bottom. If floats do not hold, wait 12 hours on cement.
- 16) Set 5-1/2" slips in "A" section with full string weight. Nipple down BOP, Nipple up well head.
- 17) Install cap. Clean mud pits and release rig.

## **CEMENT TESTING REQUIREMENTS:**

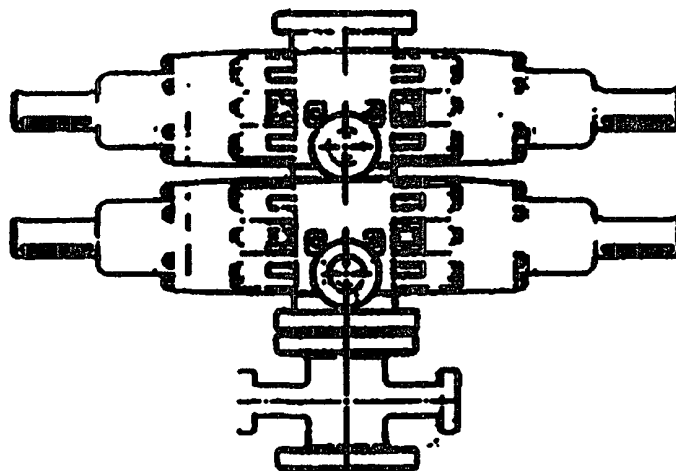
- Laboratory Blend:** Obtain thickening time, rheology, water loss, and compressive strengths of the laboratory cement blend with a water sample of the actual water to be used in cementing for each cement slurry to be pumped.
- Field Blend:** Obtain thickening time of the field cement blend with a water sample of the actual water to be used in cementing for each slurry to be pumped. If the thickening time of the field blend is consistent with the thickening time of the laboratory blend, proceed with the cement job. If not, wait on the compressive strength results. Regardless of thickening time results, obtain all of the compressive strengths of field blend to compare with the compressive strengths of the laboratory blend.

Don Robinson	Drilling Manager	(469) 450-2281	(972) 317-8345	(817) 509-1506
George Allen Teer	VP of Operations	(817) 723-1107	(817) 491-3740	(817) 870-2601
Bryan Surles	District Engineer	(817) 360-9663	(817) 346-8188	(817) 810-1971
Martin Emery	Chief Geologist	(817) 366-3693	(817) 430-4861	(817) 870-2601
Paula Hale	Sr. Regulatory Sp.	(817) 773-6002		(817) 810-1916

<b>United Rig Company, Artesia, NM</b>	Rig Company	Angel Salazar	(505) 623-7730
<b>United Rig #24</b>			
<b>Nova Mud, Inc - Hobbs, NM</b>	Drig Mud	Dale Welch	(800) 530-8786
<b>Master Tubulars – Midland, TX</b>	Casing & Tubing	Randy Martin	(800) 682-8996
<b>Suttles Logging, Inc. – Midland, TX</b>	Mudlogging	Sam Samford	(432) 687-3148
<b>Schlumberger-Artesia, NM</b>	Cementing Service	Lynn Northcutt	(505) 748-1392 cell (505) 365-7510
<b>National – Hobbs, NM</b>	Well Heads		(505) 393-9928
<b>Weatherford –Artesia, NM</b>	Float Equipment		
<b>Halliburton Logging –Hobbs, NM</b>	Open Hole Logs	Michael Escriva Tommy Johnson	(505) 392-7543
<b>Allen's Casing Crew -Hobbs, TX</b>	Csg Crew		
<b>National –Hobbs, NM</b>	General Supplies		(505) 393-9928
<b>TFH –Hobbs, NM</b>	Fork Lift		(505) 397-3270
<b>Abbot Brothers</b>	Conductor setting		
RTO Sales & Lease	Satellite Internet		(432) 550-5678



# BLOW OUT PREVENTION EQUIPMENT



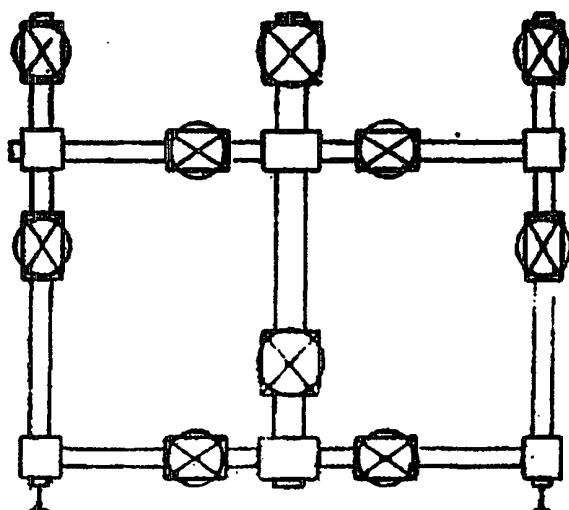
## BOP Stack

- 1 Rucker Shaffer "B" double ram  
10" - 3000 psi WP

## Closing Unit

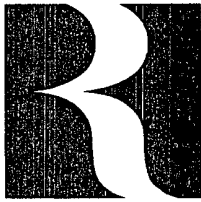
- Hydril model 80 three station accumulator
- Controls located in accumulator house and on rig floor

## CHOKE MANIFOLD



900 Series. 3000 psi WP

PLAT #2



**EUNICE SOUTHWEST PROSPECT (San Andres)**  
**Elliott "B" Fed. No. 14**  
**Well Objectives/Prognosis/Evaluation**  
**November 7, 2005**

**I) GENERAL**

Operator:	Range Operating New Mexico, Inc. (100%)	
Partners/WI:	none	
Proposed Well Designation:	Elliott "B" Fed. No. 14	
API No.:	30-025-	
Well Classification:	PUD	
Confidentiality Status:	Restricted, no information release without approval	
PTD (Permit Depth):	4500 ft MD	
Anticipated Spud Date:		
Estimated Days to Drill:	10	
Drilling Contractor:	United Rig No. 24	
Expected Type of Hydrocarbon:	Oil/Gas, Gravity and GOR variable	
Contacts:	Tom Brace, Geol. Mgr.	(817)810-1926
	Martin Emery, Project Geologist	(817)810-1951
	Steve Chapman, Reservoir Engineer	(817)810-1912
	Bobby Ebeier, Landman	(817)810-1987
	Don Robinson, Drilling Mgr.	(817)509-1506
	Bryan Surles, Oper. Eng.	(817)810-1971

**II) WELL OBJECTIVES**

The objective of the well is to drill and evaluate the Queen - San Andres Formations and complete the well as a San Andres producer. The expected **San Andres EUR** for the well is **XXXX MMCFG**. The expected **IP** is **XXX MCFG & XX BO/D**.

**III) LOCATION**

Surface Location:	<b>500 ft FNL      330 ft FEL</b> <b>Section 7-T22S-R37E</b> Lea County, New Mexico <b>Lat: 32 deg 24' 43.23"</b> <b>Long: 103 deg 11' 39.55"</b>
Bottom-hole Location:	same, vertical
Elevation:	GL:    3440 ft KB:    3450 ft
Directions to Location:	
Access to Location:	Unrestricted

**IV) PROGNOSIS**

Upper Permian Rustler Fm	+2370 ft	1080 ft MD	
Upper Permian Yates Fm	+763 ft	2687 ft MD	
Upper Permian 7 Rivers Fm	+562 ft	2888 ft MD	
Upper Permian Queen Fm	+122 ft	3328 ft MD	
Upper Permian PS Fm	-33 ft	3483 ft MD	+
Upper Permian Grayburg Fm	-212 ft	3662 ft MD	+
Upper Permian San Andres Fm	-444 ft	3894 ft MD	*
PTD	-1050 ft	4500 ft MD	

\*= Primary Reservoir Targets

+ = Secondary Reservoir Targets

**EUNICE SOUTHWEST PROSPECT (San Andres)**  
**Elliott "B" Fed. No. 14**  
**Well Objectives/Prognosis/Evaluation**

**V) PRIMARY RESERVOIR TARGETS**

Upper Permian **Grayburg DOL**

Rock Type:	DOL
Thickness:	~180 ft
Avg. Porosity:	7%; ranges from 0-14+%
Avg. Perm.:	? md
Est. Reservoir Temp.:	100-110°F
Est. Reservoir Press.:	1400-1450 psi (assuming no pressure depletion)

Upper Permian **San Andres DOL**

Rock Type:	DOL
Thickness:	~250 ft
Avg. Porosity:	10-13%; ranges from 3-20%
Avg. Perm.:	? md
Est. Reservoir Temp.:	100-110°F
Est. Reservoir Press.:	1400-1450 psi (assuming no pressure depletion)

**VI) SECONDARY RESERVOIR TARGETS**

Upper Permian **Queen &, Penrose-Skelly** Formations

**VII) PROPOSED WELL DESIGN**

Drilling Fluids/Additives: Brine, 10.1 lbs/gal  
Casing Design:

**VIII ) EVALUATION**

Mud-Logging:

Contractor:	<b>None</b>
Basic Requirements:	Cuttings lithology description/comments Oil shows/fluorescence/cut description Gas monitoring, chromatography, gas ratios Penetration rate/depth, rig operations, bit and mud properties One man unit
Correlation:	Please use the following logs for correlation and refer to Section (X) for offset well tops:
Sampling:	
Reporting:	E-mail/WWW or fax daily reports/logs to: <b>Martin Emery (Primary)</b> (817)810-1951 (wk) <a href="mailto:memery@rangeresources.com">memery@rangeresources.com</a> (817)810-1988 (fax) (817)430-4861 (hm) (817)366-3693 (cell)
Distribution:	see attached distribution

EUNICE SOUTHWEST PROSPECT (San Andres)  
Elliott "B" Fed. No. 14  
Well Objectives/Prognosis/Evaluation

VIII) EVALUATION (cont)

Conventional Coring:	None	
Open-Hole DSTs:		
DST Contractor:	None	
DST Program:	None	
Distribution:	see attached distribution	
Open-Hole Logging:		
Contractor:	BAKER HUGHES	(432)563-1275
Logging Program:	2500-4500 ft MD (TD)	DSL-CN-ZDL-DLL-MLL (log GR-Neutron to surface)
Distribution:	see attached distribution	

IX) POTENTIAL HAZARDS/PITFALLS

Problematic Drilling Zones:	
Abnormal Pressure/Temperature Zones:	Possibility of partial depletion within Queen to Grayburg Formations
Fractured/Lost Circulation Zones:	See above; Please tag mud if circulation is lost in primary pay interval
Presence of H <sub>2</sub> S or CO <sub>2</sub> :	None expected
Faults Intersecting the Wellbore:	None expected

X) CORRELATION LOG TOPS:

Correlations
Upper Permian Rustler Fm
Upper Permian Yates Fm
Upper Permian 7 Rivers Fm
Upper Permian Queen Fm
Upper Permian PS Fm
Upper Permian Grayburg Fm
Upper Permian San Andres Fm
TD

Prepared by: Martin Emery  
Date: November 7, 2005  
Revised:

~~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  
June 1, 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>Range Operating New Mexico, Inc.</u> Telephone: <u>817/810-1916</u> e-mail address: <u>phale@rangeresources.com</u>		
Address: <u>777 Main St., Ste. 800, Ft. Worth, TX 76102</u>		
Facility or well name: <u>Elliott B Federal #14</u> API #: <u>30-025- 37867</u> U/L or Qtr/Qtr <u>A</u> Sec <u>7</u> T <u>22S</u> R <u>37E</u>		
County: <u>Lea</u> Latitude <u>32°24'45.23" N</u> Longitude <u>103°11'43.21" W</u> 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"/> Unlined <input type="checkbox"/> Liner type: Synthetic <input checked="" type="checkbox"/> Thickness <u>12</u> mil Clay <input type="checkbox"/> Pit Volume <u>6,000</u> bbl	<b>Below-grade tank</b> Volume: <u>      </u> bbl Type of fluid: <u>                                </u> Construction material: <u>                                </u> Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not. <u>  </u>	
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet	(20 points)
	50 feet or more, but less than 100 feet	(10 points)
	100 feet or more	( 0 points)
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes	(20 points)
	No	( 0 points)
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet	(20 points)
	200 feet or more, but less than 1000 feet	(10 points)
	1000 feet or more	( 0 points)
<b>Ranking Score (Total Points)</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: (check the onsite box if you are burying in place) 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.

Additional Comments: Pit will also have a felt liner under the synthetic liner.

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 ☐, a general permit ☒, or an (attached) alternative OCD-approved plan ☐.

Date: 3-17-06

Printed Name/Title Paula Hale

Signature 

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:

**PAUL F. KAUTZ**


Printed Name/Title

**PETROLEUM ENGINEER**

Signature 

**MAY 18 2006**

Date:

 The sender of this message has requested a read receipt. [Click here to send a receipt.](#)

**Mull, Donna, EMNRD**

**From:** Phillips, Dorothy, EMNRD  
**To:** Mull, Donna, EMNRD  
**Cc:**  
**Subject:** RE: Financial Assurance Requirement  
**Attachments:**

**Sent:** Thu 5/18/2006 12:31 PM

None of these appear on Jane's list and all have blankets.

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**From:** Mull, Donna, EMNRD  
**Sent:** Thursday, May 18, 2006 9:00 AM  
**To:** Phillips, Dorothy, EMNRD  
**Cc:** Macquesten, Gail, EMNRD; Sanchez, Daniel J., EMNRD  
**Subject:** Financial Assurance Requirement

Dorothy,

Is the Financial Assurance Requirement for these Operators OK?

Citation Oil & Gas Corp (4537)  
COG Operating LLC ( 229137)  
David H Arrington Oil & Gas Inc (5898)  
Arch Petroleum Inc (962)  
Chesapeake Operating Inc (147179)  
Samson Resources Co (20165)  
Range Operating New Mexico Inc (227588)  
Marathon Oil Co (14021)  
Chevron USA inc (4323)  
Yates Petroleum Corp (25575)

Inactive well list has been checked on all these Operators.

Please let me know. Thanks and have a nice day. Donna