New Mexico Oil Conservation Division, District I
1625 N. French Drive
Hobbs, NM 88240

Form 3160-3
(April 2004)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. LC032573B

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

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

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

8. Lease Name and Well No. <30154> **Elliott B Federal #16**

2. Name of Operator **Range Operating New Mexico, Inc.** <227588>

9. API Well No. 30-025-37675

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

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

10. Field and Pool, or Exploratory **Eunice, San Andres, Southwest**

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface **1650' FNL & 330' FEL**
At proposed prod. zone **1650' FNL & 330' FEL** Unit H

11. Sec., T. R. M. or Blk. and Survey or Area **Sec. 7, T22S, R37E, N.M.P.M.**

14. Distance in miles and direction from nearest town or post office* **2 miles SW from Eunice**

12. County or Parish **Lea**

13. State **TX**

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	17. Spacing Unit dedicated to this well
	360	**40**
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. on file
	4500	~~B000991~~ NM 2399 (EAU)
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3430		

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
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.

25. Signature	Name *(Printed/Typed)*	Date
Paula Hale	**Paula Hale**	**12/20/2005**

Title

Approved by *(Signature)* /s/ Joe G. Lara	Name *(Printed/Typed)* /s/ Joe G. Lara	Date JAN 25 2006
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)

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

KZ

DISTRICT I
1625 N. FRENCH 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 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	Pool Name
30-025-37675	24180	Eunice, San Andres, Southwest

Property Code	Property Name	Well Number
301545	ELLIOTT B FEDERAL	16

OGRID No.	Operator Name	Elevation
227588	RANGE OPERATING NEW MEXICO, INC.	3430'

Surface Location

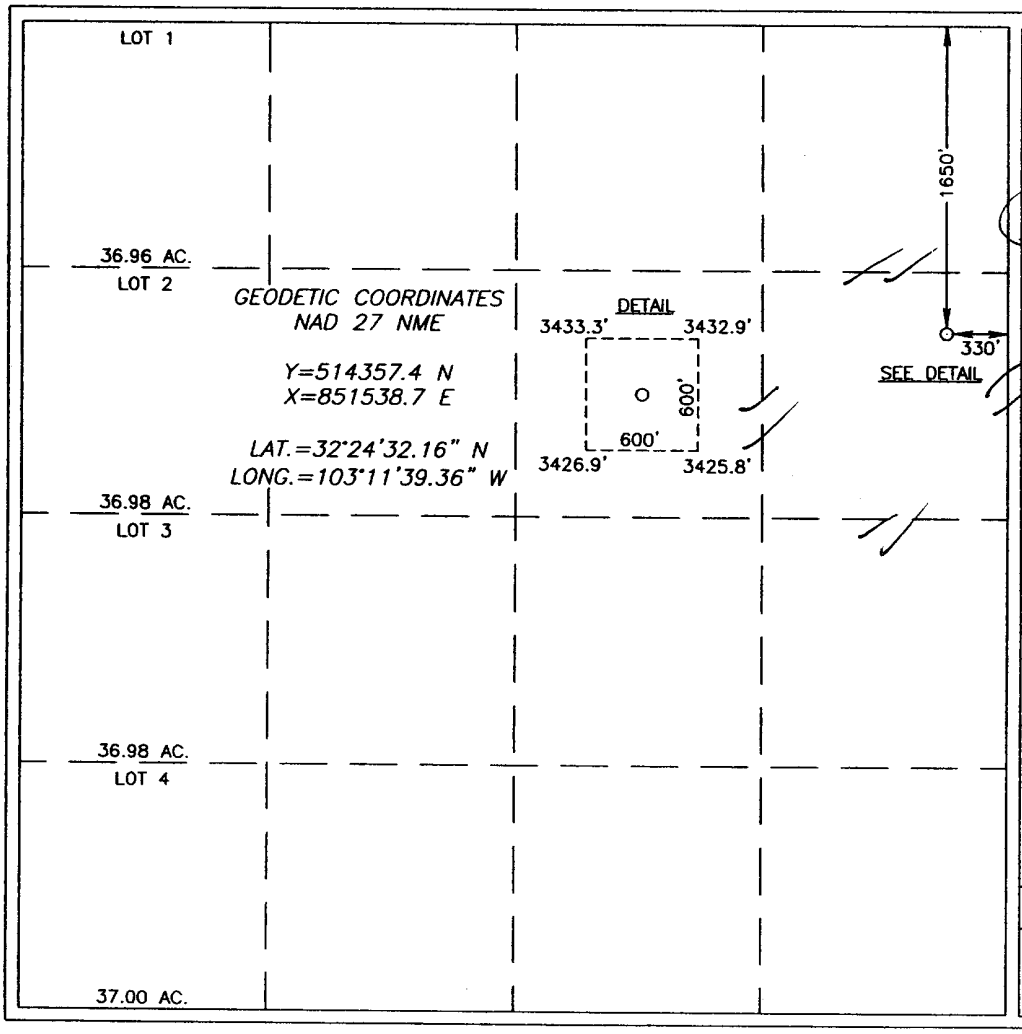
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	7	22-S	37-E		1650	NORTH	330	EAST	LEA

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	Joint or Infill	Consolidation Code	Order No.
40			

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



OPERATOR CERTIFICATION

I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.

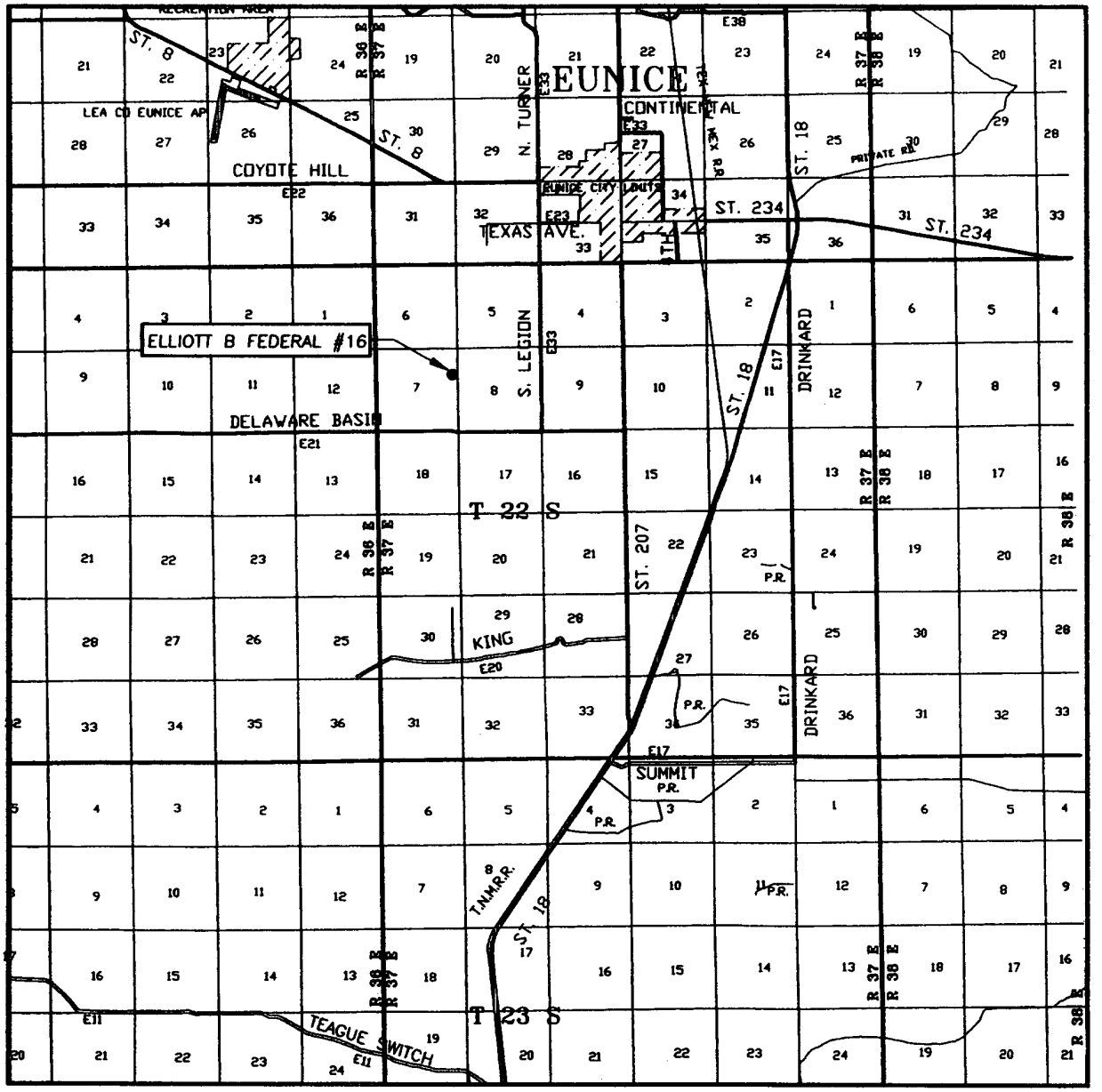
Signature
Paula Hale
Printed Name
Sr. Reg. Sp.
Title
12/10/05
Date

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 supervison, and that the same is true and correct to the best of my belief.

SEPTEMBER 20, 2005
Date Surveyed LA
Signature & Seal of Professional Surveyor
GARY L. EIDSON
NEW MEXICO
12641
PROFESSIONAL SURVEYOR
9/30/05
05.11.1421
Certificate No. GARY EIDSON 12641

VICINITY MAP



SCALE: 1" = 2 MILES

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

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 1650' FNL & 330' FEL

ELEVATION 3430'

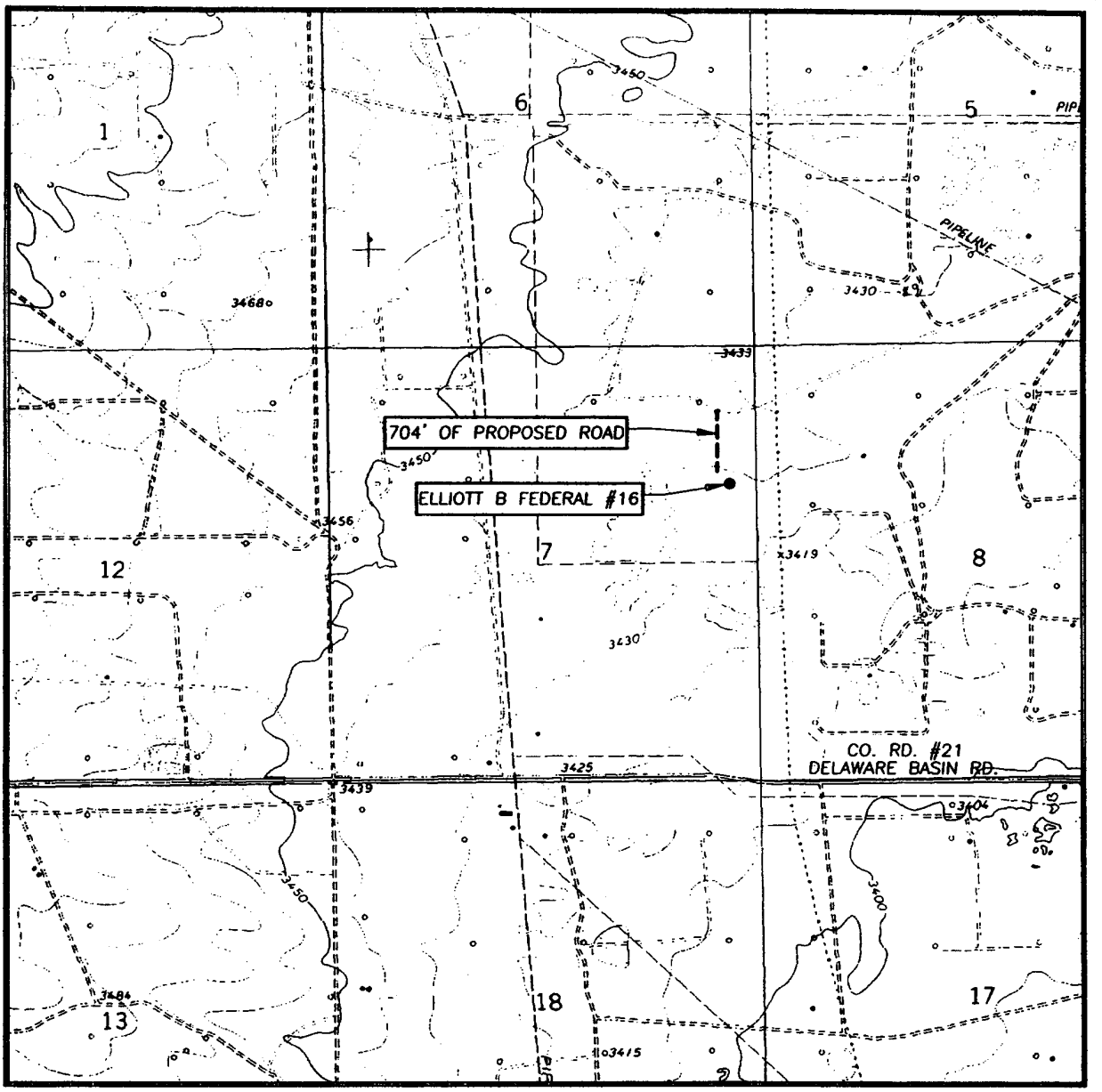
OPERATOR RANGE OPERATING NEW MEXICO, INC.

LEASE ELLIOTT B FEDERAL

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

EXHIBIT A

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

DESCRIPTION 1650' FNL & 330' FEL

ELEVATION 3430'

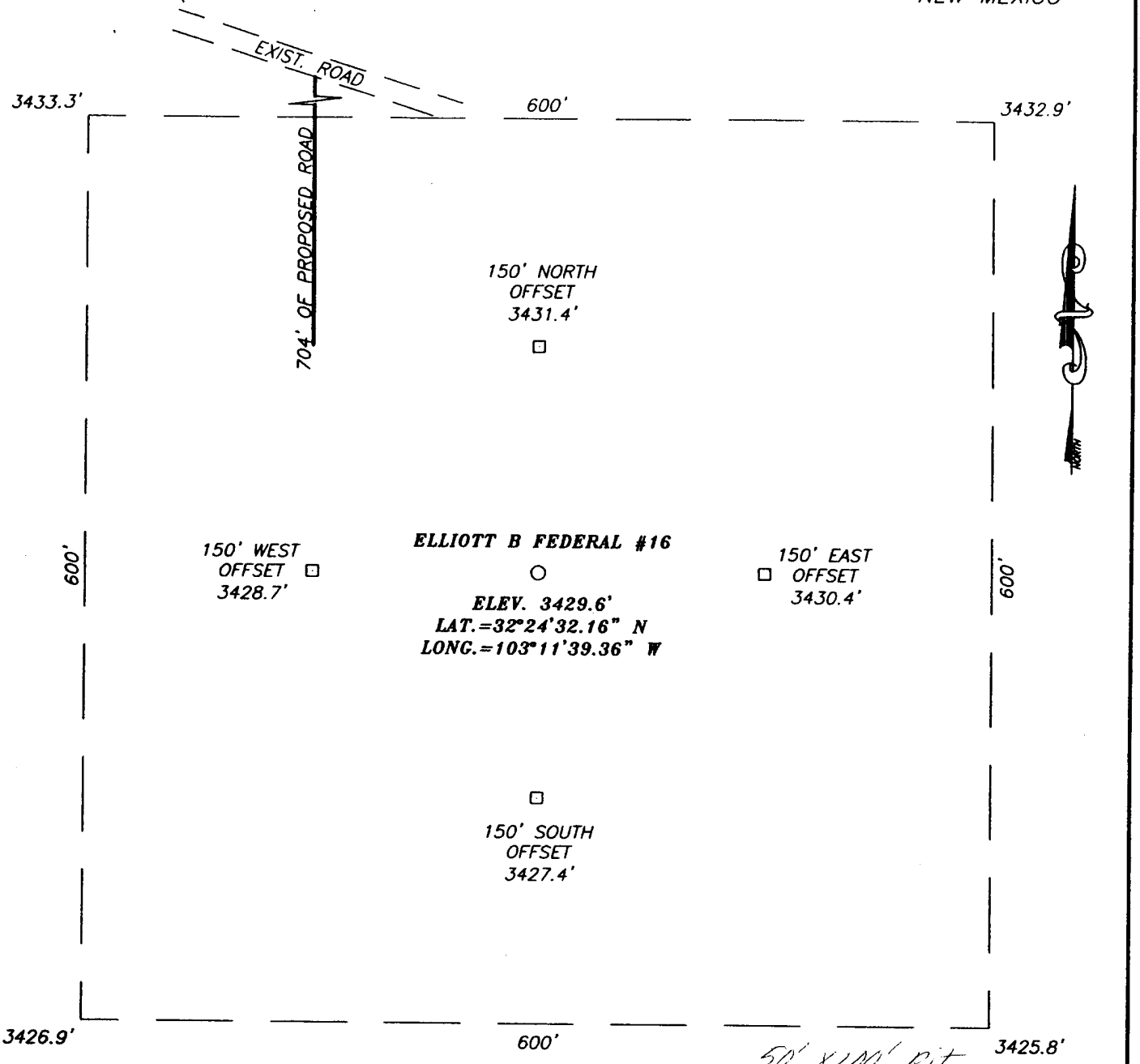
OPERATOR RANGE OPERATING NEW MEXICO, INC.

LEASE ELLIOTT B FEDERAL

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

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

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



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF CO. RD. E-21 (DELAWARE BASIN RD.) AND CO. RD. E-33 (LEGION RD.) GO NORTH ON LEAGION RD. APPROX. 1.2 MILES. TURN LEFT AND GO WEST APPROX. 0.05 MILES. TURN LEFT AND GO SOUTH APPROX. 0.1 MILES. FOLLOW ROAD TO THE RIGHT AND THEN BENDS NORTHWEST APPROX. 0.1 MILES. TURN LEFT AND GO WEST APPROX. 0.05. TURN RIGHT AND GO NORTHWEST TO A PROPOSED ROAD SURVEY ON THE LEFT. FOLLOW PROPOSED ROAD SOUTH APPROX. 704' TO THIS LOCATION.

100 0 100 200 Feet

Scale:1"=100'

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 #16 WELL
LOCATED 1650 FEET FROM THE NORTH LINE
AND 330 FEET FROM THE EAST LINE OF SECTION 7,
TOWNSHIP 22 SOUTH, RANGE 37 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

Survey Date: 9/20/05	Sheet 1 of 1 Sheets		
W.O. Number: 05.11.1421	Dr By: LA		Rev 1:N/A
Date: 9/26/05	Disk: CD#4	05111421	Scale:1"=100'

EXHIBIT B

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.:	LC032573B
Legal Description of Land:	Sec. 6, T22S, R37E NE/4 SE/4
Formations:	Blinebry, Tubb, Drinkard
Bond Coverage: (State, Nationwide or Individual)	Statewide
BLM Bond File No.:	~~B000881~~ NM2399 (EHH)

Authorized Signature: _____

Title: Petroleum Engineer

Date: 9/12/05

Multi-Point Surface Use Operating Plan
Range Operating New Mexico, Inc.
Elliott B Federal No. 16

This plan is submitted with form 3160-3, Applications for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, and the proposed construction. And the procedures to be followed in rehabilitation of the surface after completion of the operations, so that a complete appraisal can be made of the environmental affects associated with the operation.

1. Existing Roads:

   A. Exhibit A is a portion of a road map showing the location of the proposed well. The proposed location is situated approximately 1.5 miles SW of Eunice, New Mexico.

   B. Directions:
   See Exhibit B

2. Planned Access Road

   A. The proposed well site is located 1650' FNL & 330' FEL, Sec. 7.

3. Location of Existing Wells:

   A. The existing well(s) in the vicinity is shown on Exhibit D

4. Location of Existing and/or Proposed Facilities

   A. The Layout of the well pad, drilling rig and reserve pit are shown in Exhibit B & C.

   B. In the event that this well is productive, the current tank battery and production facilities will be utilized.

   C. The production facility consists of two 210 bbl steel oil storage tanks, one 500 bbl water tank, one vertical separator for production and one vertical separator for testing.

5. Location and Type of Water Supply:

   A. The well is to be drilled with both fresh and brine water to be hauled to the location by truck and will be bought from commercial sources.

6. Source of Construction Material:

   A. Any caliche required for construction of the well pad will be obtained from company-owned caliche pit.

7. Methods of Handling Waste Disposal:

   A. Drill cuttings will be disposed of in the drilling pits.

   B. Drilling fluids will be allowed to evaporate in the drilling pits until the pits are dry.

   C. Oil produced during operations will be stored in tanks and hauled off site.

   D. Human sewage will be contained in a portable chemical toilet, transported from the site and disposed of at an approved site.

   E. Trash will be deposited in a metal container and hauled to an approved disposal site.

   F. Within 30 days following drilling and/or completion operations, trash and debris will be hauled to an approved disposal site.

8. Ancillary Facilities

   None

9. Well site Layout:

   A. Exhibit B shows the dimensions of the well pad. Location of the major rig components, and well pad orientation are shown Exhibit C.

   B. Topography of the area is relatively level across the entire location. Fills should be no more than 3' deep. The location will be capped with 4" to 6" of caliche.

   C. No diversion ditches are planned.

   D. The pad has been staked and flagged and an archeological study conducted and attached with this permit application.

10. Plans for Restoration of the Surface:

    A. Upon completion of drilling, completion and production operations, the area disturbed by the project will be restored to BLM specifications or to as near their former natural condition as possible.

    B. All of the caliche material will be removed and the area will be leveled to pre-project grade.

    C. No drainage systems will be needed on the site.

    D. No segregation of soils is planned at this time as it is a blow sand area.

    E. Waste disposal was outlined in Section 7.

    F. Re-vegetation and fertilization will be as per BLM stipulations.

    G. All areas not used for production will be restored after completion of the well. The existing roads will not be restored.

11. Other Information

    A. The general location of this site is a sandy desert and mesquite brush area. The soil has a very small amount of vegetation and stockpiling of material is not planned.

    B. The vegetation is desert scrub characterized by various species of cacti, acacia, and mesquite.

    C. Wildlife species that occur in the area include: rabbits, mule deer, coyote, snakes and various rodents.

    D. No river is in the general area of the well site.

    E. An archaeological survey of the site and proposed access road has been conducted and the report is attached.

12. Surface Owner's Name and Address:

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

13. Operator's Representative and Certification.

A. The field representatives responsible for assuring compliance with the approved surface use plan are:

	Office	Home
District Engineer Bryan Surles	817-810-1971	817-346-8188
Area Production Supervisor Chris Garcia	505-394-1485	325-277-8621

B. 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 currently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Range Operating New Mexico, Inc. and it contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of the 18 U.S.C. 1001 for the filing of a false statement.

DATE: 12/20/05

Bryan Surles
District Engineer

NOTICE TO SURFACE OWNER

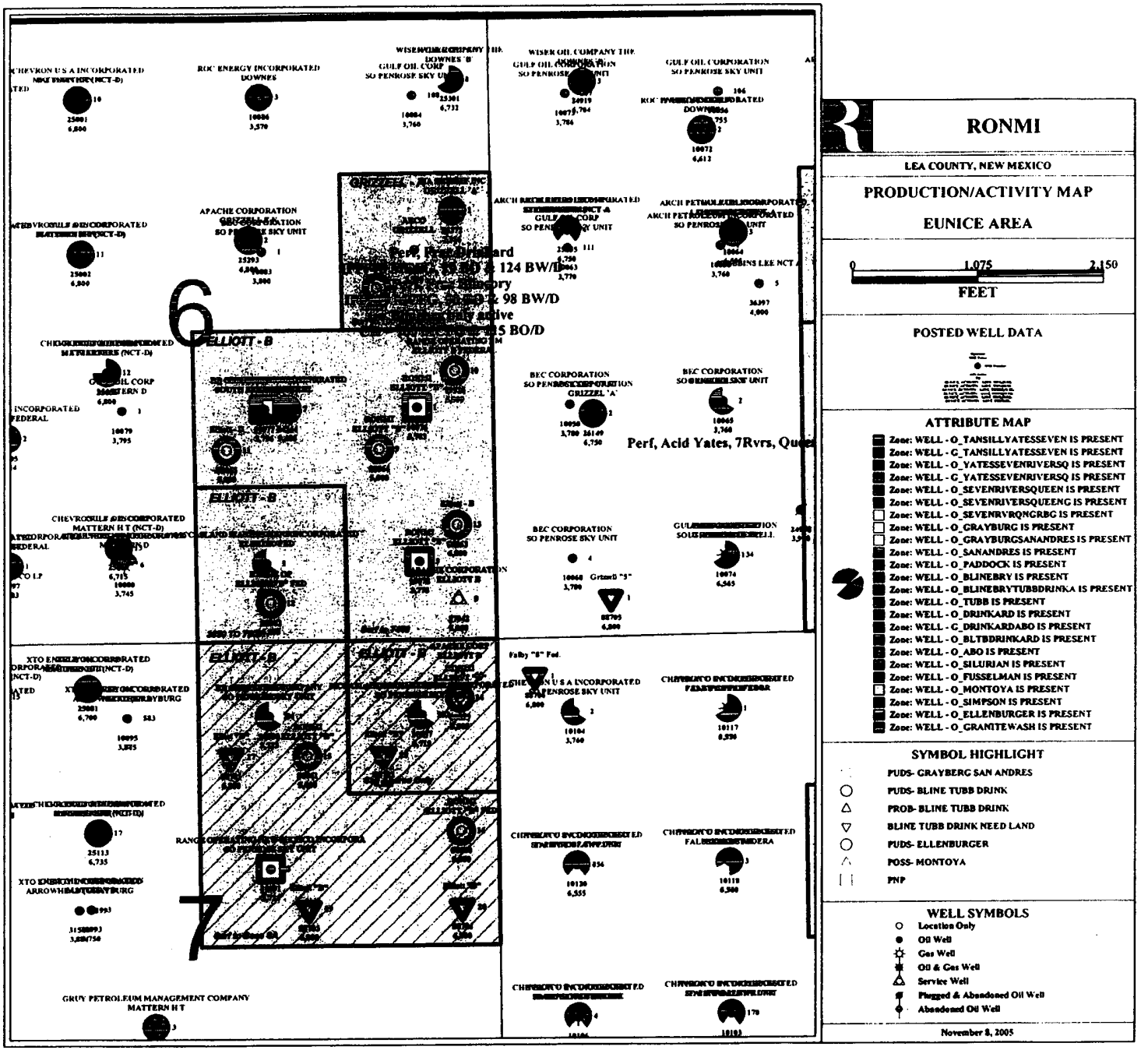
Surface Owner

Notice Date

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

12-20-05

EXHIBIT D


RONMI
LEA COUNTY, NEW MEXICO
PRODUCTION/ACTIVITY MAP
EUNICE AREA
0
1,075
2,150
FEET
POSTED WELL DATA
ATTRIBUTE MAP
Zone: WELL - O_TANSILLYATESSEVEN IS PRESENT
Zone: WELL - G_TANSILLYATESSEVEN IS PRESENT
Zone: WELL - O_YATESSEVENRIVERSQ IS PRESENT
Zone: WELL - G_YATESSEVENRIVERSQ IS PRESENT
Zone: WELL - O_SEVENRIVERSQUEEN IS PRESENT
Zone: WELL - O_SEVENRIVERSQUEENG IS PRESENT
Zone: WELL - O_SEVENRVRQNGRBG IS PRESENT
Zone: WELL - O_GRAYBURG IS PRESENT
Zone: WELL - O_GRAYBURGSANANDRES IS PRESENT
Zone: WELL - O_SANANDRES IS PRESENT
Zone: WELL - O_PADDOCK IS PRESENT
Zone: WELL - O_BLINEBRY IS PRESENT
Zone: WELL - O_BLINEBRYTUBBDRINKA IS PRESENT
Zone: WELL - O_TUBB IS PRESENT
Zone: WELL - O_DRINKARD IS PRESENT
Zone: WELL - G_DRINKARDABO IS PRESENT
Zone: WELL - O_BLTBDRINKARD IS PRESENT
Zone: WELL - O_ABO IS PRESENT
Zone: WELL - O_SILURIAN IS PRESENT
Zone: WELL - O_FUSSELMAN IS PRESENT
Zone: WELL - O_MONTOYA IS PRESENT
Zone: WELL - O_SIMPSON IS PRESENT
Zone: WELL - O_ELLENBURGER IS PRESENT
Zone: WELL - O_GRANITEWASH IS PRESENT
SYMBOL HIGHLIGHT
PUDS- GRAYBERG SAN ANDRES
PUDS- BLINE TUBB DRINK
PROB- BLINE TUBB DRINK
BLINE TUBB DRINK NEED LAND
PUDS- ELLENBURGER
POSS- MONTOYA
PNP
WELL SYMBOLS
Location Only
Oil Well
Gas Well
Oil & Gas Well
Service Well
Plugged & Abandoned Oil Well
Abandoned Oil Well
November 8, 2005
ELLIOTT - B
APACHE CORPORATION
GRUY PETROLEUM MANAGEMENT COMPANY
MATTERN H T
BEC CORPORATION
SO PENROSE SKY UNIT
ROC ENERGY INCORPORATED
DOWNES
GULF OIL CORPORATION
SO PENROSE SKY UNIT

1. (For BLM Use) **BLM Report No.**	**2. (For BLM Use)** **Reviewer's Initials/Date**_____ **Accepted ( ) Rejected ( )**	**3. NMCRIS Number:** 95185

4. Type of Report: **Negative (X)** **Positive ( )**

5. Title of Report: A Class III Cultural Resource Survey for the Elliott B Federal No. 16 Well Pad and Access Road **Author(s):** Justin Rein	**6. Fieldwork Date(s):** October 25, 2005 **7. Report Date:** October 26, 2005
8. Consultant Name/Address: Boone Archaeological Services, LLC **Direct Charge:** Danny Boone **Field Personnel Names:** Justin Rein **Address:** 2030 North Canal Carlsbad, New Mexico 88220 **Phone** (505) 885-1352	**9. Cultural Resource Permit No.:** 190-2920-05-G **10. Consultant Report No.:** BAS-10-05-06
11. Customer Name: Range Operating New Mexico, Inc. **Responsible Individual:** Bryan Surles **Address:** 777 Main Street, Suite 800 Fort Worth, TX 76102 **Phone:** (817) 810-1971	**12. Customer Project No.:**

13. Land Status	BLM	State	Private	Other	Total
a. Area Surveyed (acres)	9.88				9.88
b. Area of Effect (acres)	4.48				4.48

14. Block **Length** 600 ft **Width** 600 ft
Linear **Length** 704 ft **Width** 100 ft

15. Location (Map[s] Attached):

a. **State:** New Mexico

b. **County:** Lea County

c. **BLM Office:** Carlsbad Field Office

d. **Nearest City or Town:** Eunice, New Mexico

e. **Legal Description:** T 22 S, R 27 E, Section 7: E½ NE¼

f. **Well Pad Footages:** The Elliott B Fed No. 16 is centered 1,650 feet from the north line and 330 feet from the east line of Section 7.

g. **USGS 7.5' Map Name(s), Date(s), and Code(s):** Eunice, New Mexico 1969 Photorevised 1979(32103-D2)

16. **Project Data:**

a. **Records Search:** **Date(s) of BLM File Review:** October 25, 2005 **Name of Reviewer(s):** Justin Rein
Date(s) of ARMS Data Review: October 25, 2005 **Name of Reviewer(s):** Justin Rein
Findings (see Field Office requirements to determine area to be reviewed during records search): No previously recorded sites were found within one mile of the project area.

b. Description of Undertaking: On October 25, 2005, Justin Rein with Boone Archaeological Services LLC performed a pedestrian cultural resource survey for the proposed Elliott B Federal No. 16 well pad and associated access road. Bryan Surles, with Range Operating New Mexico, Inc., requested the survey and provided plats. The project can be found in Township 22 South, Range 37 East, Section 7. The proposed well is centered 1,650 feet from the north line and 330 feet from the east line of Section 7. The proposed access road begins at the northwest corner of the well location and travels 704 ft north to an existing lease road. The well will impact an area 400 ft by 400 ft, yet a 600 ft by 600 ft block was surveyed around the well center to ensure protection of cultural materials. Likewise, a 100 ft wide corridor was surveyed along the staked access road centerline. In all, 9.88 acres was surveyed on Private property with Federal mineral rights under the jurisdiction of the Bureau of Land Management – Carlsbad Field Office (BLM-CFO).

c. Environmental Setting (NRCS soil designation; vegetative community; elevation; etc.): The project area is located three miles southwest of Eunice, New Mexico. The elevation averages 3,430 feet above mean sea level. Overall, the terrain trends downhill towards the southeast at a grade of less than one percent. Local soils are of the Pyote-Maljamar-Kermit association as defined by the Soil Conservation Service of the U.S. Department of Agriculture. The fine grained sandy soils have been wind-worked into sparsely scattered coppice dunes less than 1 m high. Local vegetation is typical of Chihuahuan Desert scrub and includes various grasses, snakeweed, mesquite, yucca, prickly pear cactus, and various low forbes. Due to the vegetative ground cover, surface visibility averaged 85 percent at the time of survey. Aside from an existing lease road to the north of the project, the immediate project area remains largely undeveloped. Additional wells and oil field operations are active are in the surrounding area. The project is otherwise susceptible to natural alluvial and aeolean processes and openly grazing cattle.

Climatic data was obtained for the nearby City of Jal, NM from the Western Regional Climate Center online database. From 1919 to 2004, Jal received an average annual precipitation of 12.39 inches. During the same time, Jal reported an average high temperature of 79.5 degrees Fahrenheit and an average low temperature of 48.3 degrees Fahrenheit. January was the coldest month averaging 59.8 degrees Fahrenheit, while July was the warmest on average at 96.5 degrees Fahrenheit.

d. Field Methods (transect intervals; crew size; time in field; etc.): A crew of one spent 2.5 hours surveying the project area. A 15 m transect interval was used.

e. Artifacts Collected?: None

17. **Cultural Resource Findings:** No cultural materials were encountered.

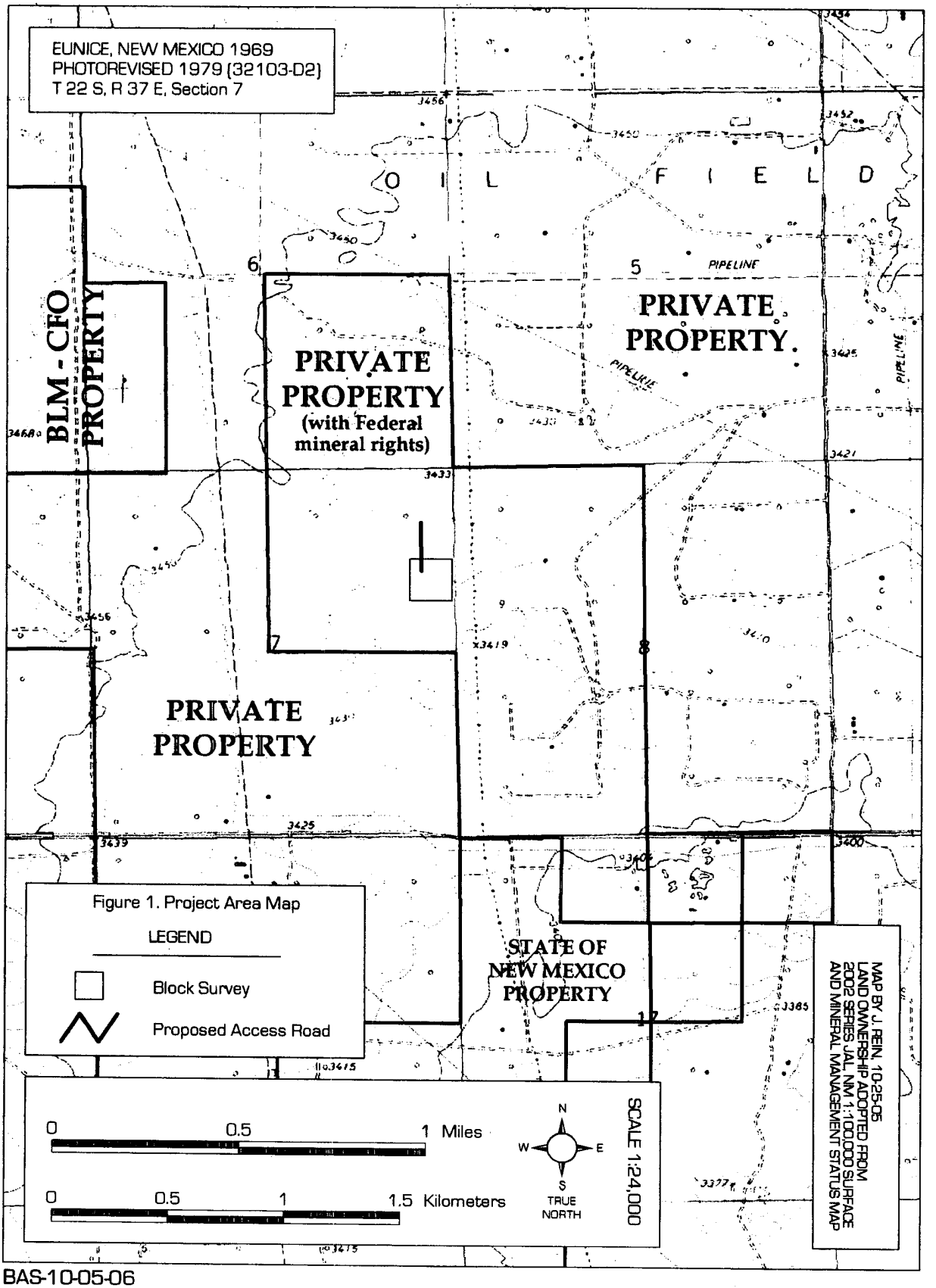
a. Location/Identification of Each Resource: N/A

b. Evaluation of Significance of Each Resource: N/A

18. **Management Summary (Recommendations):** No cultural materials were encountered during the survey. As such, archaeological clearance is recommended for the proposed Elliott B Federal No. 16 well pad and associated access road. If any cultural materials are encountered during construction, work at that location should cease and archaeologists with the BLM-CFO should be notified immediately.

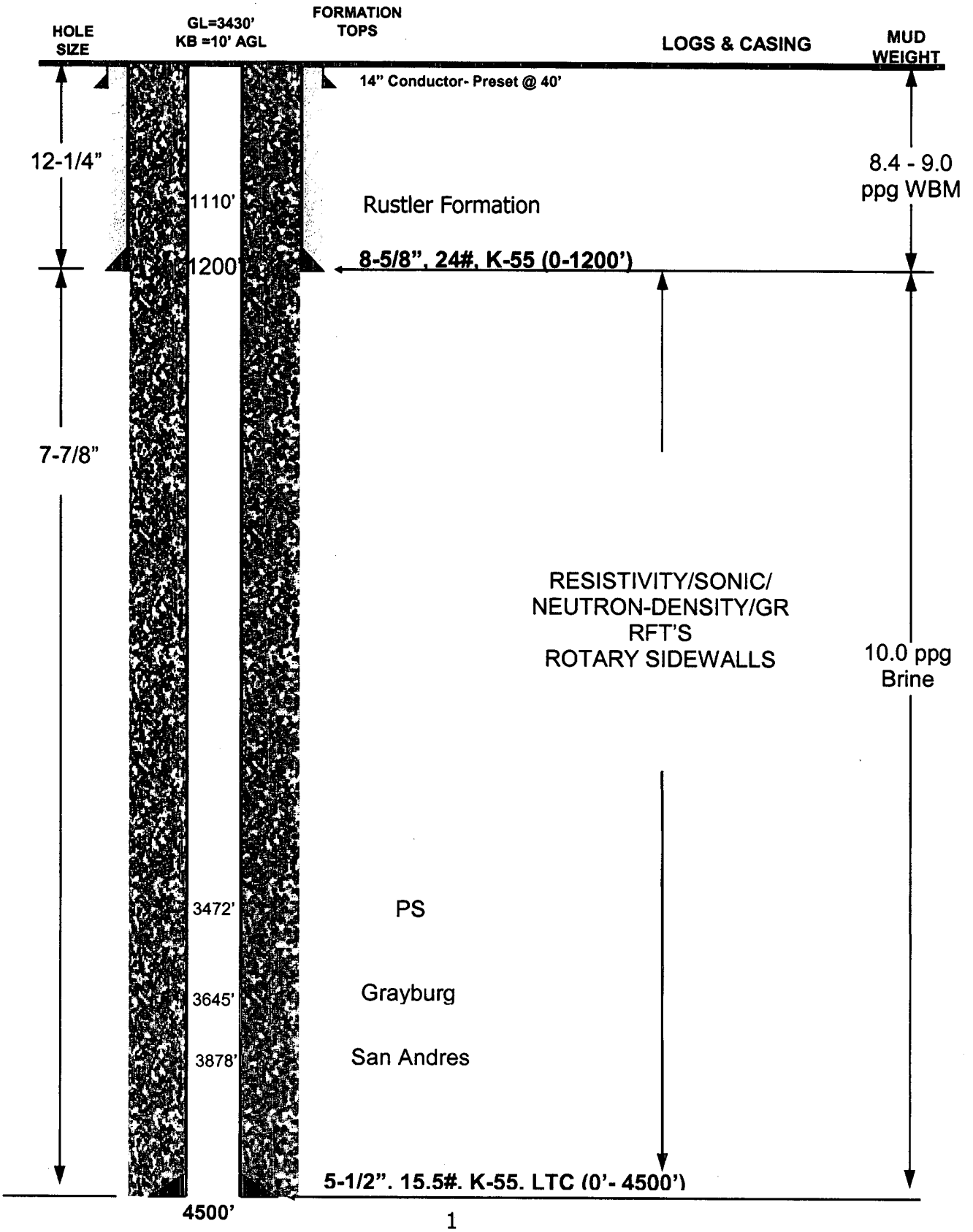
19.
I certify the information provided above is correct and accurate and meets all applicable BLM standards.

Responsible Archaeologist _____ 10-26-05
Signature **Date**


EUNICE, NEW MEXICO 1969
PHOTOREVISED 1979 (32103-D2)
T 22 S, R 37 E, Section 7
O I L F I E L D
BLM - CFO PROPERTY
PRIVATE PROPERTY (with Federal mineral rights)
PRIVATE PROPERTY.
PRIVATE PROPERTY
STATE OF NEW MEXICO PROPERTY
PIPELINE
Figure 1. Project Area Map
LEGEND
Block Survey
Proposed Access Road
0 0.5 1 Miles
0 0.5 1 1.5 Kilometers
N
W E
S
TRUE NORTH
SCALE 1:24,000
MAP BY J. REIN. 10-25-05
LAND OWNERSHIP ADOPTED FROM
2002 SERIES JAL NM 1:100000 SURFACE
AND MINERAL MANAGEMENT STATUS MAP

BAS-10-05-06

WELL	**: Elliott B Federal #16**	**AFE:**
SL	**: 1650' FNL & 330' FEL, Sec 7-T22S-R37E**	**FIELD: San Andres**
COUNTY	**: LEA COUNTY**	**TD: 4500'**
STATE	**: NEW MEXICO**	**PERMIT NO:**



Range Operating New Mexico

Elliott B Federal #16
Lea County, NM
Drilling Program

Prepared 11/29/2005

PROPOSED DEPTH: 4,500' MD / 4,500' TVD
GROUND ELEVATION: **3,430'**
KB: **10'**

LOCATION: 1,650' FNL & 330' FEL, Sec. 7-T22S-R37E, Lea County, NM

ANTICIPATED PRODUCTIVE FORMATION: San Andres

API NO: 30-025-

GENERAL:
The Elliott B Federal #16 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	+2330 ft	1110 ft MD	
Upper Permian Yates Fm	+763 ft	2677 ft MD	
Upper Permian 7 Rivers Fm	+565 ft	2875 ft MD	
Upper Permian Queen Fm	+124 ft	3316 ft MD	
Upper Permian PS Fm	-32 ft	3472 ft MD	+
Upper Permian Grayburg Fm	-205 ft	3645 ft MD	+
Upper Permian San Andres Fm	-438 ft	3878 ft MD	*
PTD	-1060 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 – 9.0	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#, K-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 third 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 NM OCD and prepare to run 1" 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 ± 500' or nearest bit run per NMOCD rules. Use sweeps as needed to clean hole. Drill to ± 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 Wire line 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", 15.5#, K-55, LT&C casing as follows:

a) Float shoe (thread-lock)
b) 1 jt. 5-1/2", 15.5#, K-55, LT&C casing (thread-lock)
c) Float collar (thread-lock)
d) 5-1/2", 15.5#, K-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%. 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:

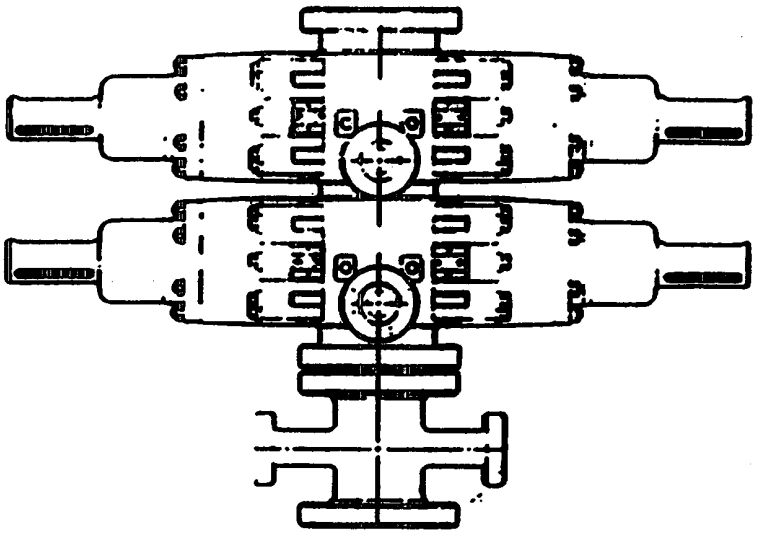
Laboratory Blend: Obtain thickening time, rheology, water loss, and compressive strengths of the laboratory cement blend with a water sample of the actual water to be used in cementing for each cement slurry to be pumped.

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 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

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

BLOW OUT PREVENTION EQUIPMENT



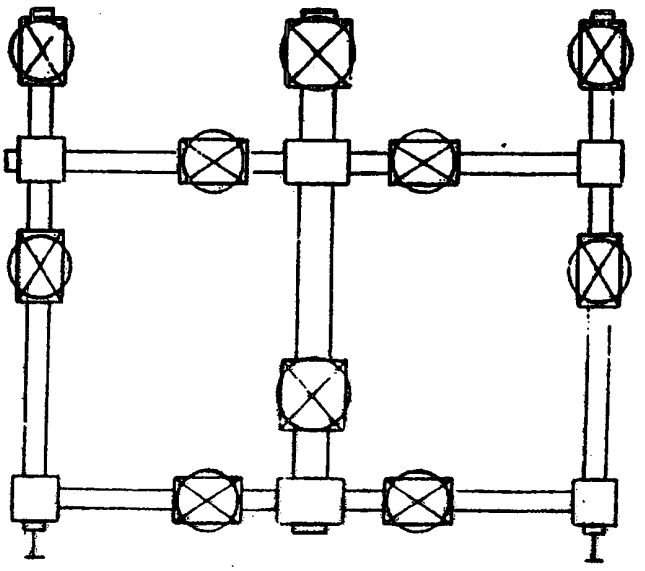
BOP Stack

— 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. 16
Well Objectives/Prognosis/Evaluation
November 4, 2005

I) GENERAL

Operator:	**Range Operating New Mexico, Inc. (100%)**	
Partners/WI:	none	
Proposed Well Designation:	Elliott "B" Fed. No. 16	
API No.:	30-025-	
Well Classification:	PUD	
Confidentiality Status:	Restricted, no information release without approval	
PTD (Permit Depth):	4400 ft MD	
Anticipated Spud Date:	Nov, 2005	
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 MMCFGE**. The expected **IP** is **XXX MCFG & XX BO/D**.

III) LOCATION

Surface Location:	**1650 ft FNL 330 ft FEL** **Section 7-T22S-R37E** Lea County, New Mexico **Lat: 32 deg 24' 32.16"** **Long: 103 deg 11' 39.36"**
Bottom-hole Location:	same, vertical
Elevation:	GL: 3430 ft KB: 3440 ft
Directions to Location:	From the intersection of Co. Rd. E-21 (Delaware Basin Rd.) and Co. Rd. E-33 (Legion Rd.) go north on Legion Rd. approx. 1.2 mi. Turn left and go west approx. 0.05 mi. Turn left and go south approx. 0.1 mi. Follow road to the right and then bends northwest approx. 0.1 mi. Turn left and go west approx. 0.05 mi. Turn right and go northwest to a proposed road survey on the left. Follow proposed road south approx. 704 ft to location.
Access to Location:	Unrestricted

IV) PROGNOSIS

Upper Permian Rustler Fm	+2330 ft	1110 ft MD	
Upper Permian Yates Fm	+763 ft	2677 ft MD	
Upper Permian 7 Rivers Fm	+565 ft	2875 ft MD	
Upper Permian Queen Fm	+124 ft	3316 ft MD	
Upper Permian PS Fm	-32 ft	3472 ft MD	+
Upper Permian Grayburg Fm	-205 ft	3645 ft MD	+
Upper Permian San Andres Fm	-438 ft	3878 ft MD	*
PTD	-960 ft	4400 ft MD	

*= Primary Reservoir Targets
+= Secondary Reservoir Targets

EUNICE SOUTHWEST PROSPECT (San Andres)
Elliott "B" Fed. No. 16
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:	**None**
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: **Martin Emery** **(Primary)** (817)810-1951 (wk) memery@rangeresources.com (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. 16
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:	2500-4300 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_2S or CO_2:	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 4, 2005
Revised:

SPECIAL DRILLING STIPULATIONS

THE FOLLOWING DATA IS REQUIRED ON THE WELL SIGN

Operator's Name: Range Operating New Mexico, Inc. Well Name & #: Elliot B Federal #16
Location: 1650FNL & 330FEL Sec.7, T.22S., R.37E.
Lease: LC-032573B County: Lea State: New Mexico

The Special stipulations check marked below are applicable to the above described well and approval of this application to drill is conditioned upon compliance with such stipulations in addition to the General Requirements. The permittee should be familiar with the General Requirements, a copy of which is available from a Bureau of Land Management office. EACH PERMITTEE HAS THE RIGHT OF ADMINISTRATIVE APPEAL TO THESE STIPULATIONS PURSUANT TO TITLE 43 CRF 3165.3 AND 3165.4.

This permit is valid for a period of one year from the date of approval or until lease expiration or termination whichever is shorter.

I. SPECIAL ENVIRONMENT REQUIREMENTS

(X) Lesser Prairie Chicken (stips attached)
( ) San Simon Swale (stips attached)
( ) Flood plain (stips attached)
( ) Other

II. ON LEASE - SURFACE REQUIREMENTS PRIOR TO DRILLING

(X) The BLM will monitor construction of this drill site. Notify the (X) Carlsbad Field Office at (505) 234-5972 ( ) Hobbs Office (505) 393-3612, at least 3 working days prior to commencing construction.

(X) Roads and the drill pad for this well must be surfaced with 6 inches of compacted caliche.

( ) All topsoil and vegetation encountered during the construction of the drill site area will be stockpiled and made available for resurfacing of the disturbed area after completion of the drilling operation. Topsoil on the subject location is approximately _____inches in depth. Approximately _____cubic yards of topsoil material will be stockpiled for reclamation.

(X) Other:

III. WELL COMPLETION REQUIREMENTS

( ) A Communlitization Agreement covering the acreage dedicated to the well must be filed for approval with the BLM. The effective date of the agreement must be prior to any sales.

(X) Surface Restoration: If the well is a producer, the reserve pit(s) will be backfilled when dry, and cut-and-fill slopes will be reduced to a slope of 3:1 or less. All areas of the pad not necessary for production must be re-contoured to resemble the original contours of the surrounding terrain, and topsoil must be re-distributed and re-seeded with a drill equipped with a depth indicator (set at depth of ½ inch) with the following seed mixture, in pounds of Pure Live Seed (PLS), per acre. Seeding should be done either late in the fall (September 15 - November 15, before freeze up, or early as possible the following spring to take advantage of available ground moisture. **See attached seed mixture.**

( ) A. Seed Mixture 1 (Loamy Sites)
Side Oats Grama (*Bouteloua curtipendula*) 5.0
Sand Dropseed (*Sporobolus cryptandrus*) 1.0

(x) B. Seed Mixture 2 (Sandy Sites)
Sand Dropseed (*Sporobolus crptandrus)* 1.0
Sand Lovegrass (*Eragostis trichodes*) 1.0
Plains Bristlegrass (*Setaria magrostachya*) 2.0

( ) C. Seed Mixture 3 (Shallow Sites)
Side oats Grama (*Boute curtipendula*) 1.0

( ) D. Seed Mixture 4 (Gypsum Sites)
Alkali Sacaton (*Sporobollud airoides*) 1.0
Four-Wing Saltbush (*Atriplex canescens*) 5.0

(X) OTHER:
If any flow lines, power lines, or ROWs are needed for this well, a Sundry Notice or ROW needs to be submitted and Approved prior to installation.

RESERVE PIT CONSTRUCTION STANDARDS

The reserve pit shall be constructed entirely in cut material and lined with 6-mil plastic. Mineral material extracted from within the boundary of the APD during construction of the well pad and reserve pits and be used for the construction of this well pad and its immediate access road only, as long as that portion of the access road it is use on remains on-lease. Removal of any additional material from this location for construction or improvement of other well pads and other access or lease roads must first be purchased from BLM.

Reclamation: Reclamation of this type of deep pit will consist of pushing the pit walls into the pit when sufficiently dry to support track equipment. The pit liner is NOT TO BE RUPTURED to facilitate drying; a ten month period after completion of the well is allowed for drying of the pit contents.
The pit area must be contoured to the natural terrain with all contaminated drilling mud buried with at least 3 feet of clean soil. The reclaimed area will then be seeded as specified in this permit.

OPTIONAL PIT CONSTRUCTION STANDARDS

The reserve pit may be constructed in predominantly fill material if:

(1) Lined as specified above and

(2) A temporary or emergency pit may be constructed immediately adjacent to the reserve pit as long as the pit remains within the APD boundary. Mineral material removed from this pit may be used for the construction of this well pad only and its immediate access road, as long as that portion of the access road the material is used on remains on-lease. Removal of any material from the APD boundary for use on other well locations or roads must first be purchased from BLM.

Reclamation of the reserve pit consists of bulldozing all reserve pit contents and contaminants into the borrow pit and covering with a minimum of 3 feet of clean soil material. The entire area must be re-contoured, all trash removed, and reseeded as specified in this permit.

CULTURAL

Whether or not an archaeological survey has been completed and notwithstanding that operations are being conducted as approved, the lessee/operator/grantee shall notify the BLM immediately if previously unidentified cultural resources are observed during surface disturbing operations. From the time of the observation, the lessee/operator/grantee shall avoid operations that will result in disturbance to these cultural resources until directed to process by BLM.

TRASH PIT STIPS

All trash, junk, and other waste material shall be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not permitted.

PRAIRIE CHICKENS

No surface use is allowed during the following time periods; unless otherwise specified, this stipulation does not apply to operation and maintenance of production facilities.

On the lands described below:

All of Section 7, T.22S., R. 37 E.,

For the purpose of: Protecting Prairie Chickens:

Drilling for oil and gas, and 3-D geophysical exploration operations will not be allowed in Lesser Prairie Chicken Habitat during the period of March 15 through June 15, each year. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 a.m. and 9:00 a.m. The 3:00 a.m. and 9:00 a.m. restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during the period. Additionally, no new drilling will be allowed within up to 200 meters of leks know at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

BLM Serial #: LC-032573B
Company Reference: Elliot B Federal #16

Seed Mixture for LPC Sand/Shinnery Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A
**Four-winged Saltbush	5lbs/A

* This can be used around well pads and other areas where caliche cannot be removed.

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Range Operating New Mexico Incorporated
Well Name & No: Elliot B Federal No. 16
Location: Surface: 1650' FNL & 330' FEL, Sec. 07, T. 22 S., R. 37 E.
Lease: NMLC 032573-B
Lea County, New Mexico

I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell, NM 88201, (505) 627-0272 for wells in Chaves and Roosevelt Counties; the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:

A. Spudding

B. Cementing casing: 8 ⅝ inch; 5 ½ inch;

C. BOP Tests

2. A Hydrogen Sulfide (H2S) Drilling Plan shall be in operations three days or 500 feet prior to drilling into the **Top of the Yates formation** estimated to be at 2460 ft in depth. A mud logging unit capable of sniffing gas at the return flow line with audible alarms maybe substituted on this well bore. The utilization of such unit is bound by the same stipulations pertaining to set up requirements. All rig personnel shall be trained in H2S safety awareness and the cautions of the return flow line.

3. 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.

4. 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.

5. 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 ⅝ inch shall be set at **1200 Feet** with 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 ½ inch Production casing is to **circulate to top of string**.

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 ⅝ 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.

III. CONTINUED:

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

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

-The test 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 safe workman-like manner. Hard line connections shall be required.
-Both low pressure and high pressure testing of BOPE is required.

G Gourley 1/19/06

BLM Serial #: LC-032573B
Company Reference: Range Operating New Mexico, Inc.
Well # & Name: Elliot B Federal #16

STANDARD STIPULATIONS FOR PERMANENT RESOURCE ROADS
CARLSBAD FIELD OFFICE

A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

The holder/grantee/permittee shall hereafter be identified as the holder in these stipulations. The Authorized Officer is the person who approves the Application for Permit to Drill (APD) and/or Right-of-Way (ROW).

GENERAL REQUIREMENTS

A. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

B. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, *et. seq.*) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized by this grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

C. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, *et. seq.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et. seq.*) on the right-of-way (unless the release or threatened release is wholly unrelated to the right-of-way holder's activity on the right-of-way). This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

D. If, during any phase of the construction, operation, maintenance, or termination of the road, any oil or other pollutant should be discharged, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil of other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all

damages to Federal lands resulting there from the Authorized Officer may take such measures as deemed necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any liability or responsibility.

E. The holder shall minimize disturbance to existing fences and other improvements on public domain surface. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times.

The holder will make a documented good-faith effort to contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence.

F. The Holder shall ensure that the entire right-of-way, including the driving surface, ditching and drainage control structures, road verges and any construction sites or zones, will be kept free of the following plant species: Malta starthistle, African rue, Scotch thistle and salt cedar. The Holder agrees to comply with the following stipulations:

1. ROAD WIDTH AND GRADE

The road will have a driving surface of 14 feet (all roads shall have a minimum driving surface of 12 feet, unless local conditions dictate a different width). The maximum grade is 10 percent unless the box below is checked. Maximum width of surface disturbance from construction will be 30 feet.

☐ Those segments of road where grade is in excess of 10% for more than 300 feet shall be designed by a professional engineer.

2. CROWNING AND DITCHING

Crowning with materials on site and ditching on one side of the road on the uphill side will be required. The road cross-section will conform to the cross section diagrams in Figure 1. If conditions dictate, ditching may be required for both sides of the road; if local conditions permit, a flat-bladed road may be considered (if these conditions exist, check the appropriate box below). The crown shall have a grade of approximately 2% (i.e., 1" crown on a 12' wide road).

☒ Ditching will be required on both sides of the roadway as shown on the attached map or as staked in the field.

☐ Flat-blading is authorized on segment(s) delineated on the attached map.

3. DRAINAGE

Drainage control shall be ensured over the entire road through the use of borrow ditches, out-sloping, in-sloping, natural rolling topography, lead-off (turnout) ditches, culverts, and/or drainage dips.

A. All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval for lead-off ditches shall be determined according to the following table, but may be amended depending upon existing soil types and centerline road slope (in %):

SPACING INTERVAL FOR TURNOUT DITCHES

Percent slope	Spacing interval
0% - 4%	400' - 150'
4% - 6%	250' - 125'
6% - 8%	200' - 100'
8% - 10%	150' - 75'

A typical lead-off ditch has a minimum depth of 1 foot below and a berm 6 inches above natural ground level. The berm will be on the down-slope side of the lead-off ditch. The ditch end will tie into vegetation whenever possible.

For this road the spacing interval for lead-off ditches shall be at

☐ 400 foot intervals.

☐ _____ foot intervals.

☐ locations staked in the field as per spacing intervals above.

☐ locations delineated on the attached map.

B. Culvert pipes shall be used for cross drains where drainage dips or low water crossings are not feasible. The minimum culvert diameter must be 18 inches. Any culvert pipe installed shall be of sufficient diameter to pass the anticipated flow of water. Culvert location and required diameter are shown on the attached map (Further details can be obtained from the Roswell District Office or the appropriate Resource Area Office).

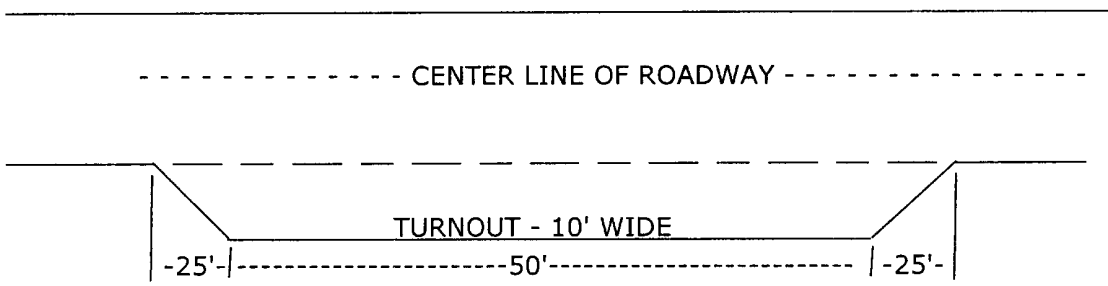
C. On road slopes exceeding 2%, drainage dips shall drain water into an adjacent lead-off ditch. Drainage dip location and spacing shall be determined by the formula:

$$\text{spacing interval} = \frac{400'}{\text{road slope in \%}} + 100'$$

Example: 4% slope: spacing interval = $\frac{400}{4}$ + 100 = 200 feet

4. TURNOUTS

Unless otherwise approved by the Authorized Officer, vehicle turnouts will be required. Turnouts will be located at 2000-foot intervals, or the turnouts will be intervisible, whichever is less. Turnouts will conform to the following diagram:



STANDARD TURNOUT - PLAN VIEW

5. SURFACING

Surfacing of the road or those portions identified on the attached map may, at the direction of the Authorized Officer, be required, if necessary, to maintain traffic within the right-of-way with caliche, gravel, or other surfacing material which shall be approved by the Authorized Officer. When surfacing is required, surfacing materials will be compacted to a minimum thickness of six inches with caliche material. The width of surfacing shall be no less than the driving surface. Prior to using any mineral materials from an existing or proposed Federal source, authorization must be obtained from the Authorized Officer.

A sales contract for the removal of mineral materials (caliche, sand, gravel, fill dirt, etc.) from an authorized pit, site, or on location must be obtained from the BLM prior to using any such mineral material from public lands. Contact the BLM solid minerals staff for the various options to purchase mineral material.

6. CATTLEGUARDS

Where used, all cattleguard grids and foundation designs and construction shall meet the American Association of State Highway and Transportation Officials (AASHTO) Load Rating H-20, although AASHTO U-80 rated grids shall be required where heavy loads (exceeding H-20 loading), are anticipated (See BLM standard drawings for cattleguards). Cattleguard grid length shall not be less than 8 feet and width of not less than 14 feet. A wire gate (16-foot minimum width) will be provided on one side of the cattleguard unless requested otherwise by the surface user.

7. MAINTENANCE

The holder shall maintain the road in a safe, usable condition. A maintenance program shall include, but not be limited to blading, ditching, culvert installation, culvert cleaning, drainage installation, cattleguard maintenance, and surfacing.

8. PUBLIC ACCESS

Public access along this road will not be restricted by the holder without specific written approval being granted by the Authorized Officer. Gates or cattleguards on public lands will not be locked or closed to public use unless closure is specifically determined to be necessary and is authorized in writing by the Authorized Officer.

9. CULTURAL RESOURCES

Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the authorized officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the authorized officer after consulting with the holder.

10. SPECIAL STIPULATIONS:

See reclamation stipulations attached.

See Lesser Prairie Chicken stip attached.

PRAIRIE CHICKENS

No surface use is allowed during the following time periods; unless otherwise specified, this stipulation does not apply to operation and maintenance of production facilities.

On the lands described below:

All of Section 7, T.22S., R. 37 E.,

For the purpose of: Protecting Prairie Chickens:

Drilling for oil and gas, and 3-D geophysical exploration operations will not be allowed in Lesser Prairie Chicken Habitat during the period of March 15 through June 15, each year. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 a.m. and 9:00 a.m. The 3:00 a.m. and 9:00 a.m. restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during the period. Additionally, no new drilling will be allowed within up to 200 meters of leks know at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

BLM Serial #: LC-032573B
Company Reference: Elliot B Federal #16

Seed Mixture for LPC Sand/Shinnery Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A
**Four-winged Saltbush	5lbs/A

* This can be used around well pads and other areas where caliche cannot be removed.

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

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

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

Form C-144
June 1, 2004

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: Range Operating New Mexico, Inc.. Telephone: 817-810-1916 e-mail address: phale@rangeresources.com
Address: 777 Main St., Ste. 800, Fort Worth, TX 76102
Facility or well name: Elliott B Federal #16 API #: 30-025 - 37675 U/L or Qtr/Qtr H Sec 7 T 22S R 37E
County: Lea Latitude 32°24'32.16" Longitude 103°11'39.36" NAD: 1927 ☒ 1983 ☐
Surface Owner: Federal ☐ State ☐ Private ☐ Indian ☐

Pit	**Below-grade tank**	
Type: Drilling ☒ Production ☐ Disposal ☐ Workover ☐ Emergency ☐ Lined ☒ Unlined ☐ Liner type: Synthetic ☒ Thickness 12 mil Clay ☐ Pit Volume 6,000 bbl	Volume: ____bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes ☐ If not, explain why not.	
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)
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)
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)
	Ranking Score (Total Points)	

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 your 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.

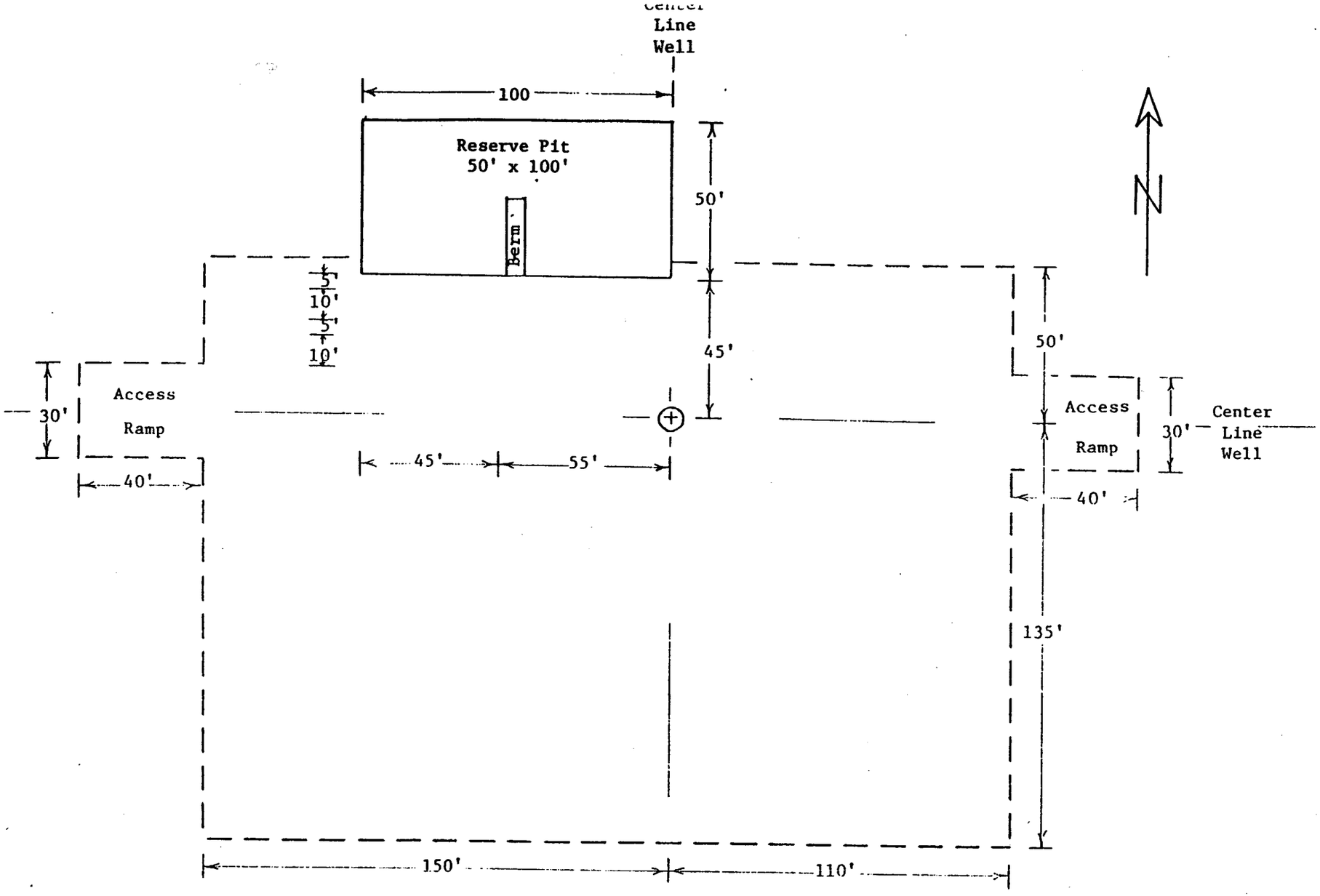
Additional Comments: Pit will also have a felt liner under the synthetic liner.

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: 12/20/05
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:
Printed Name/Title PETROLEUM ENGINEER Signature Date: FEB 02 2006



UNITED DRILLING, INC.

LOCATION PLAT

RIG 24

Scale: 1"=40'