

OCD-HOBBS

Form 3160-3  
(April 2004)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. <b>NMLC032592A</b>
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator <b>Range Operating New Mexico, Inc.</b>		7. If Unit or CA Agreement, Name and No.
3a. Address <b>777 Main Street Suite 800 Fort Worth TX 76102</b>		8. Lease Name and Well No. <b>Trantula Federal #3 &lt;35081&gt;</b>
3b. Phone No. (include area code) <b>&lt;227588&gt; (817) 810-1908</b>		9. API Well No. <b>30-225-38208</b>
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface <b>2310' FSL &amp; 330' FEL</b> At proposed prod. zone <b>2310' FSL &amp; 330' FEL</b>		10. Field and Pool, or Exploratory <b>Justis Tue-Dr</b>
14. Distance in miles and direction from nearest town or post office* <b>3 Miles Northeast From Jal, NM</b>		11. Sec., T. R. M. or Blk. and Survey or Area <b>Sec.3, T25S, R37E N.M.P.M.</b>
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 <b>160</b>	17. Spacing Unit dedicated to this well <b>40.19</b>
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth <b>6600</b>	20. BLM/BIA Bond No. on file <b>NM 2399</b>
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>3153'</b>	22. Approximate date work will start* <b>12/01/2006</b>	23. Estimated duration <b>15 Days</b>

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 <i>Linda C. Stiles</i>	Name (Printed/Typed) <b>Linda C. Stiles</b>	Date <b>09/26/2006</b>
Title <b>Sr. Engineering Tech</b>		
Approved by (Signature) <i>/s/ Don Peterson</i>	Name (Printed/Typed) <b>/s/ Don Peterson</b>	Date <b>DEC 04 2006</b>
Title <b>FOR FIELD MANAGER</b>		
Office <b>CARLSBAD FIELD OFFICE</b>		

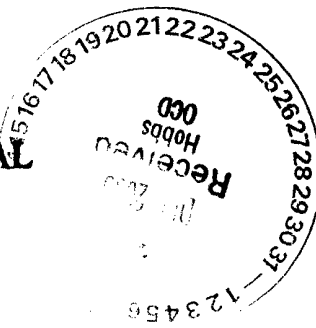
Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

**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)

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL



**CAPTAN CONTROLLED WATER BASIN**

**APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED**

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

ROSWELL FIELD OFFICE  
2909 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.: LC032592A  
Legal Description of land: Southeast of Southeast quarter of  
Sec. 3, T25S, R37E  
Formations: Justis, Tubb-Drinkard  
Bond Coverage: (State, Nationwide or Individual) Statewide  
BLM Bond File No.: NM 2399

Authorized Signature: \_\_\_\_\_



D. K. Robinson

Title: Drilling Manager

Date: 09-26-2006



**RANGE** RESOURCES

October 31, 2006

United States Department of The Interior  
Bureau of Land Management  
Carlsbad Field Office  
620 East Greene Street  
Carlsbad, NM 88220-6292

RE: Tarantula 3 Federal 3  
Sec. 3 T25S R37E  
Lea County, NM

Gentlemen:

The surface owner of the subject well is Ms. Rebecca Joan Doom, whose address is 47 Doom Lane, Jal, New Mexico 88252. Please accept this letter as my testimony that Range Operating New Mexico, Inc. has made a written agreement to pay surface damages to Ms. Doom on October 25, 2006. Please call me if you have any questions.

Thank you,

Neal Harrington  
Vice President Land  
817.870.2601 (office)

RE/lcs

**Range Resources Corporation**

777 Main Street

Suite 800

Fort Worth, Texas 76102

Tel: (817) 870-2601

Fax: (817) 870-2316

**RANGE OPERATING NEW MEXICO, INC.**

777 MAIN STREET, SUITE 800  
FORT WORTH, TEXAS 76102  
817.870.2601  
817.870.2316 (FAX)

October 24, 2006

Ms. Rebecca Joan Doom  
47 Doom Lane  
Jal, NM 88252

**Re: Surface Damages  
Tarantula "3" Fed #3 well  
Section 3, T25S, R37E,  
Lea County, NM**

Dear Becky:

The following outlines our proposed settlement of the surface damages relating to the subject well:

1. \$10,000.00 location damages. This amount is based upon the utilization of the total disturbed surface area (the area set out on the attached plat). Any additional disturbed surface area will be paid at \$.25/sf (to be settled within 60 days from the completion or plugging date of the subject well).
2. \$35/rod for new roads. We will use the existing caliched road that was built for the Tarantula 3 Fed #1. The new road will be built from the "turn" in the existing road to the new location (along the east side of the existing Southern Union ROW). We have contacted Southern Union regarding the use of the area of their ROW that we plan to build our new road.
3. \$4/yd for caliche (for all caliche used to build the location and roads, whether or not located on the proposed location and road). We will utilize caliche from your designated caliche pit (subject to the caliche being of acceptable quantity and quality).
4. Prior to commencing any dirtwork, Range will cordon off the total proposed location and roads (20' max width)—see attached plat.
5. Purchase our fresh water through Ram or other locally owned service company (or pay you a \$.35/barrel fee).

6. Call you prior to entering the location and/or commencing any work on the roads and location.
7. All damages to be paid prior to commencing any work.
8. Attached road plat and location plat of 10-24-06 are a part of this agreement.

In the event the above correctly sets out the surface damages, please acknowledge your acceptance by signing the space provided for below and return one signed copy to me in the enclosed envelope. Upon receipt, I will request a damage check from our accounting department and forward it to you prior to the commencement of the operation. Should you have any questions, please do not hesitate to contact me at 817.870.2601.

Very truly yours,



Robert Ebeier  
Senior Landman

Attachment

**AGREED TO AND ACCEPTED**

this 25th day of October, 2006.

  
Rebecca Joan Doom

## DISTRICT I

1625 N. FRENCH DR., ROSAS, NM 86240

## 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>30-025-38208</b>	Pool Code	Pool Name <b>Justis Tubb Drinkard</b>
Property Code <b>35081</b>	Property Name <b>TARANTULA "3" FEDERAL</b>	Well Number <b>3</b>
OGED No. <b>227588</b>	Operator Name <b>RANGE OPERATING NEW MEXICO, INC.</b>	Elevation <b>3153'</b>

## Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	3	25-S	37-E		2310	SOUTH	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.						

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 4	LOT 3	LOT 2	LOT 1
40.29 AC	40.25 AC	40.23 AC	40.19 AC
<p>GEODETIC COORDINATES NAD 27 NME</p> <p>Y=423350.5 N X=868436.2 E</p> <p>LAT.=32.158306° N LONG.=103.142796° W</p>			
<p>SEE DETAIL</p> <p>330'</p> <p>2310'</p> <p>DETAIL</p> <p>3151.4' 3160.9'</p> <p>600'</p> <p>3146.8' 3154.8'</p>			

**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.

*[Signature]* 11/4/06  
Signature Date  
**DON ROBINSON**  
Printed Name

**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.

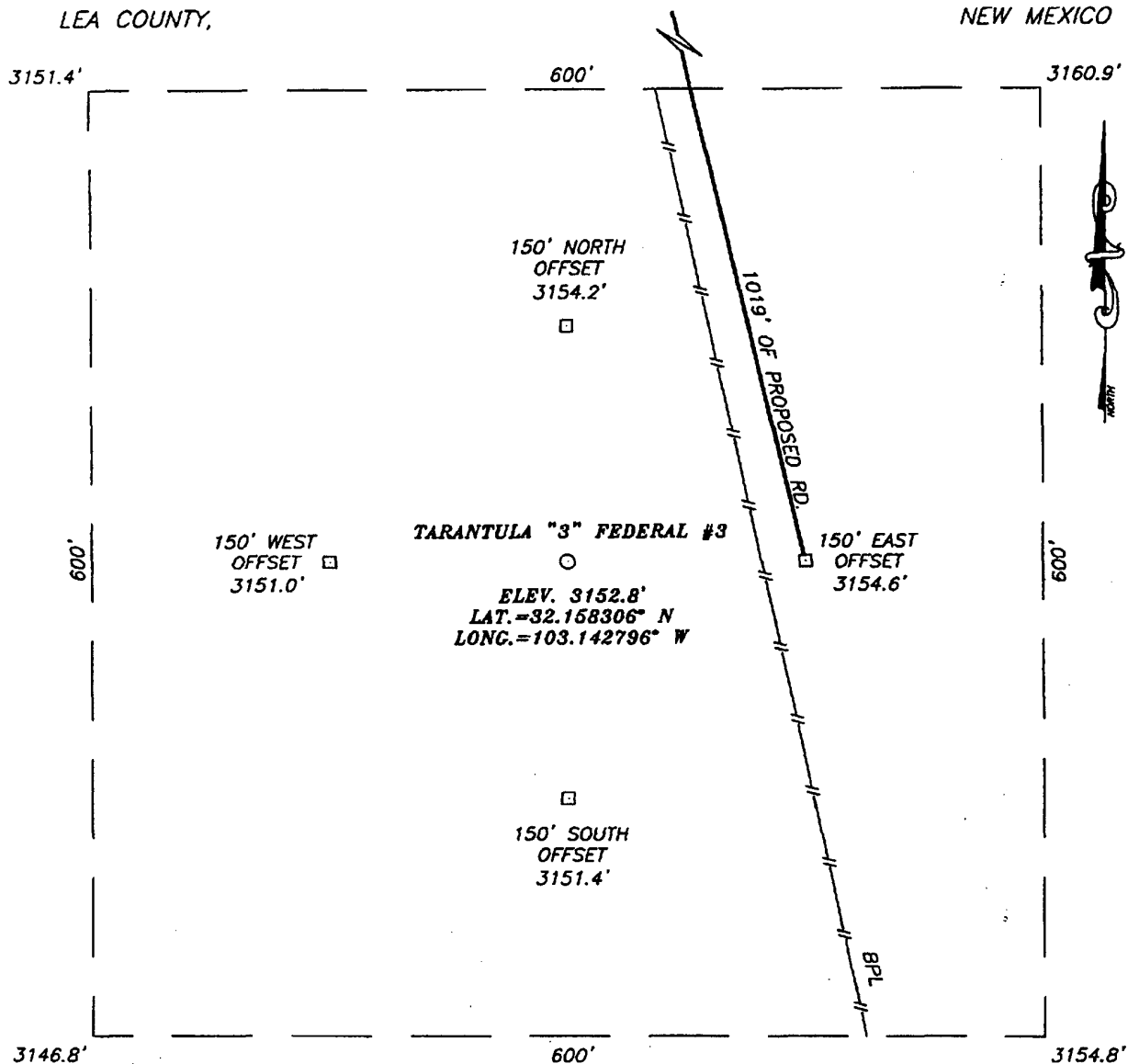
AUGUST 25, 2006

Date Surveyed MR

Signature & Seal of Professional Surveyor  
*[Signature]* 8/30/06  
06.11.1379

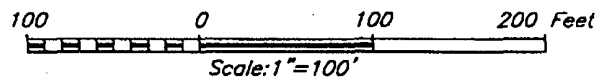
Certificate No. GARY EIDSON 12641

**SECTION 3, TOWNSHIP 25 SOUTH, RANGE 37 EAST, N.M.P.M.,**  
LEA COUNTY, NEW MEXICO



**DIRECTIONS TO LOCATION**

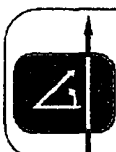
FROM THE INTERSECTION OF ST. HWY. #128 AND CO. RD. J-4 (WILLIS RD.), GO NORTH ON CO. RD. J-4 APPROX. 2.8 MILES. TURN LEFT AND GO WEST APPROX. 0.1 MILE. TURN LEFT AND GO SOUTH APPROX. 0.1 MILE TO A PROPOSED ROAD SURVEY. FOLLOW ROAD SURVEY APPROX. 0.2 MILES TO THIS LOCATION.



**RANGE OPERATING NEW MEXICO, INC.**

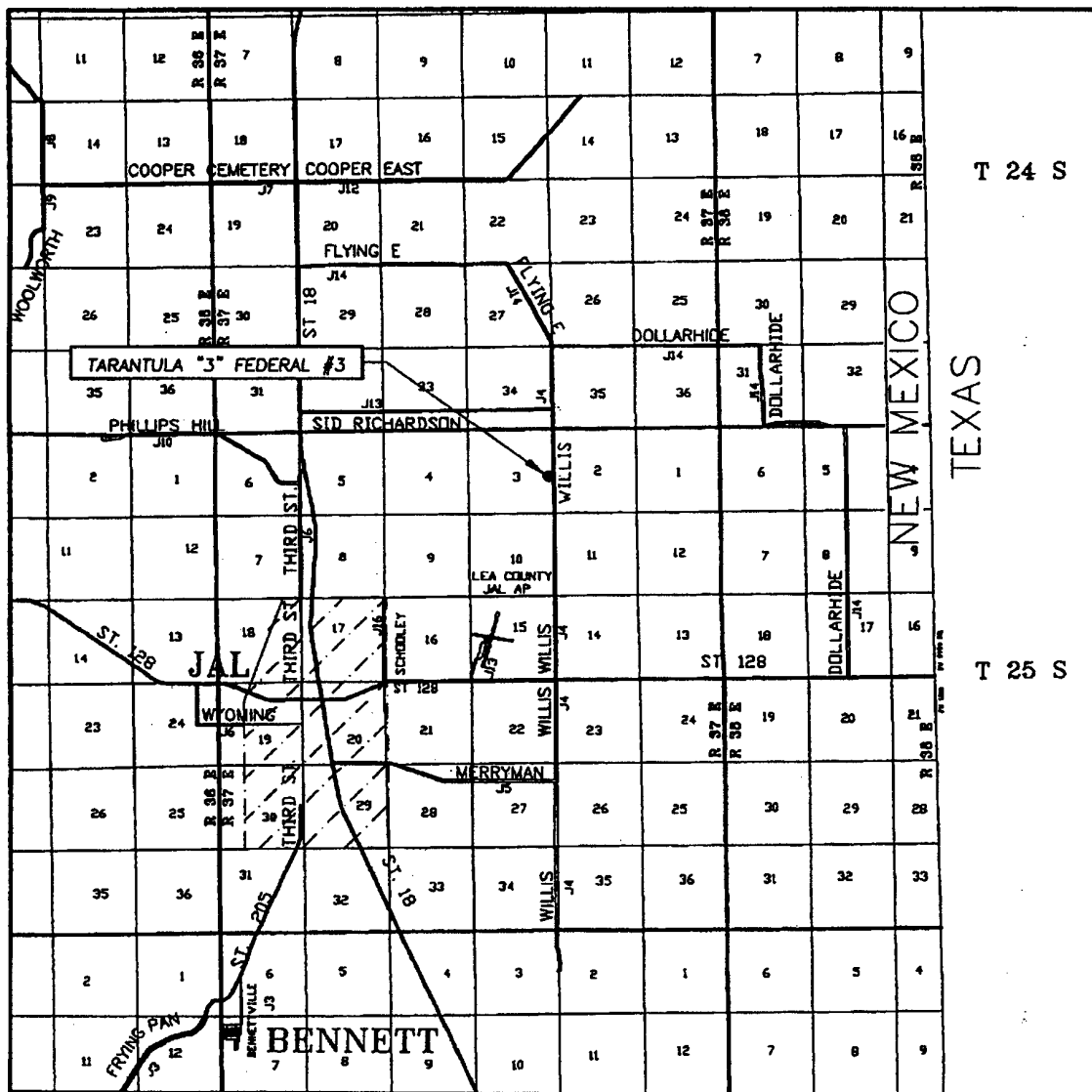
TARANTULA "3" FEDERAL #3  
LOCATED 2310 FEET FROM THE SOUTH LINE  
AND 330 FEET FROM THE EAST LINE OF SECTION 3,  
TOWNSHIP 25 SOUTH, RANGE 37 EAST, N.M.P.M.,  
LEA COUNTY, NEW MEXICO.

Survey Date: 08/25/06	Sheet 1 of 1 Sheets
W.O. Number: 06.11.1379	Dr By: M.R.
Date: 08/29/06	Disk: CD#6
06111379	Scale: 1"=100'



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

## VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 3 TWP. 25-S RGE. 37-E

SURVEY N.M.P.M.

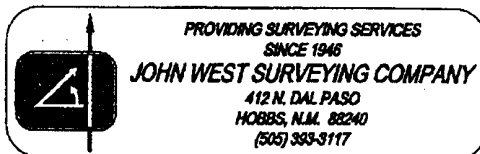
COUNTY LEA STATE NEW MEXICO

DESCRIPTION 2310' FSL &amp; 330' FEL

ELEVATION 3153'

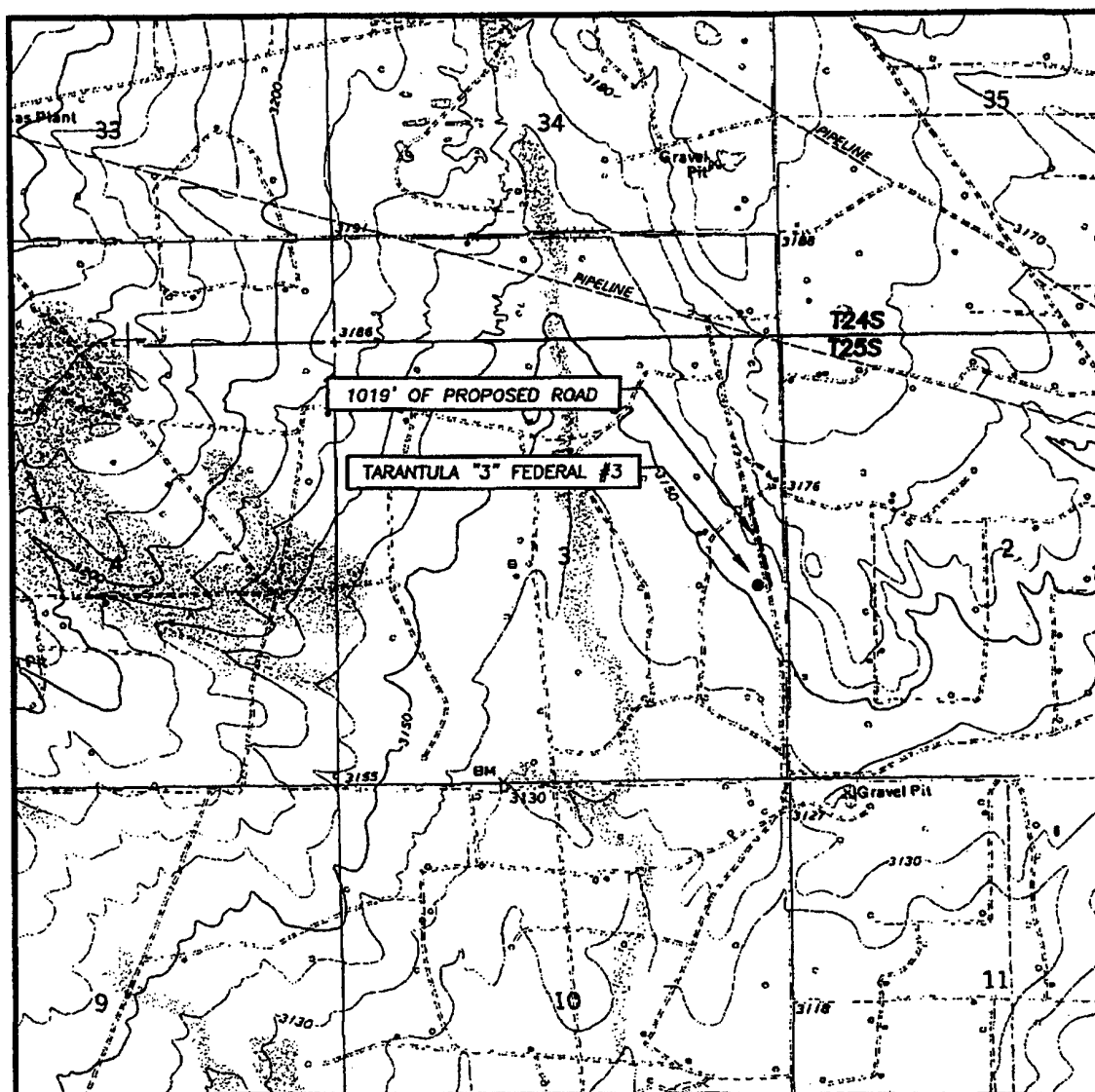
OPERATOR RANGE OPERATING  
NEW MEXICO, INC.

LEASE TARANTULA "3" FEDERAL





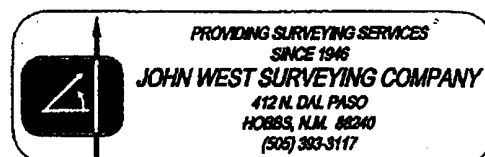
# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

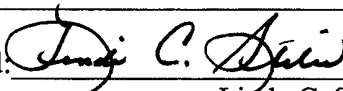
CONTOUR INTERVAL:  
JAL NW, N.M. - 10'  
CUSTER MOUNTAIN, N.M. - 10'SEC. 3 TWP. 25-S RGE. 37-ESURVEY N.M.P.M.COUNTY LEA STATE NEW MEXICODESCRIPTION 2310' FSL & 330' FELELEVATION 3153'OPERATOR RANGE OPERATING  
NEW MEXICO, INC.LEASE TARANTULA "3" FEDERAL

U.S.G.S. TOPOGRAPHIC MAP

JAL NW, N.M.

# NOTICE OF STAKING

NOTICE OF STAKING (Not to be used in place of Application for Permit to Drill Form 3160-3)		6. Lease Number  NM0542015
1. Oil Well <u>X</u> Gas Well _____ Other _____ (Specify)		7. If Indian, Alottee or Tribe Name
2. Name of Operator  Range Operating New Mexico, Inc.		8. Unit Agreement Name
3. Name of Specific Contact Person  Linda Stiles		9. Farm or Lease Name  Trantula 3 Federal
4. Address & Phone No. of Operator or Agent  777 Main St. Suite 800 Ft. Worth, TX 76102 (817) 870-2601		10. Well No. 3
5. Surface Location of Well  2310' FSL & 330' FEL Attach: a) Sketch showing road entry onto pad, pad dimensions, and reserve pit. b) Topographical or other acceptable map showing location, access road, and lease boundaries.		11. Field or Wildcat name  Justis
		12. Sec., T., R. M., or Blk and Survey or Area  3, T25S, R37E
		13. County, Parish or Borough  Lea
15. Formation Objective (s)  Tubb/Drinkard	16. Estimated Well Depth  6600	14. State  New Mexico
17. Additional Information (as appropriate; shall include surface owner's name) Intrepid Mining NM, LLC		

18. Signed:  Title: Sr Engineering Tech Date: 9-26-2006  
Linda C. Stiles

Note: Upon receipt of the Notice, the Bureau of Land Management (BLM) will schedule the date of the onsite predrill inspection and notify you accordingly. The location must be staked and access road flagged prior to the onsite.

Operators must consider the following prior to the onsite:

- a) H2S Potential
- b) Cultural Resources (Archeology)
- c) Federal Right of Way or Special Use Permit

Multi-Point Surface Use Operating Plan  
Range Operating New Mexico  
Tarantula 3 Fed #3

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, 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 3 miles Northeast of Jal, New Mexico.
- B. Directions:  
From the intersection of State Hwy. 128 and County Road J-4 (Willis Road). Go North on County Road J-4 apporx. 2.8 miles. Turn left and go West approx. 0.1 mile. Turn left and go South approx. 0.1 mile to a proposed road survey. Follow road survey approx. 0.2 miles to this location. Planned Access Road
- C. Approximately 1019' of new road will be constructed on flat terrain as per BLM specifications from Willis Rd. to location as shown on Exhibit B

2. Location of Existing Wells:

- A. Two existing well in the vicinity, Trantula 3 Federal 1 and Trantula 3 Federal 2.

3. Location of Existing and/or Proposed Facilities

- A. The layout of the well pad, drilling rig and reserve pit are shown in Exhibit C.
- B. In the event that this well is productive, a flow line will be laid to the battery at the Tarantula 3 Fed #1 which has the same mineral ownership. The line will be laid along the ARC surveyed road between the Tarantula 3 Fed #1 and the proposed well.
- C. The production facility will consist of two 500 bbl steel oil storage tanks, one 500 bbl closed top fiberglass tank, one separator and one heater treater at the Tarantula 3 Fed #1 location.

4. 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.

5. Source of Construction Material:

- A. Material excavated from the reserve pit will be used to build location and any additional material needed will come from Fee land.

6. 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.

7. Ancillary Facilities

None

8. Well site Layout:

- A. Exhibit C shows the dimensions of the well pad. Location of the major rig components, and well pad orientation are shown.
- 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 stacked and flagged and an archeological study conducted and attached with this permit application.

9. 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 spoils 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.

10. Surface Restored

- A. This is private/federal surface and a damage agreement has been negotiated with Rebecca Joan Doom (surface owners), 47 Doom Lane, Jal, New Mexico 88252. (505) 395-2877.

11. Other Information

- A. The general location of this site is a rocky 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 bodies of water are located near this location.
- E. An archaeological survey of the site and proposed access road has been conducted and the report is attached.


12. Operator's Representative and Certification

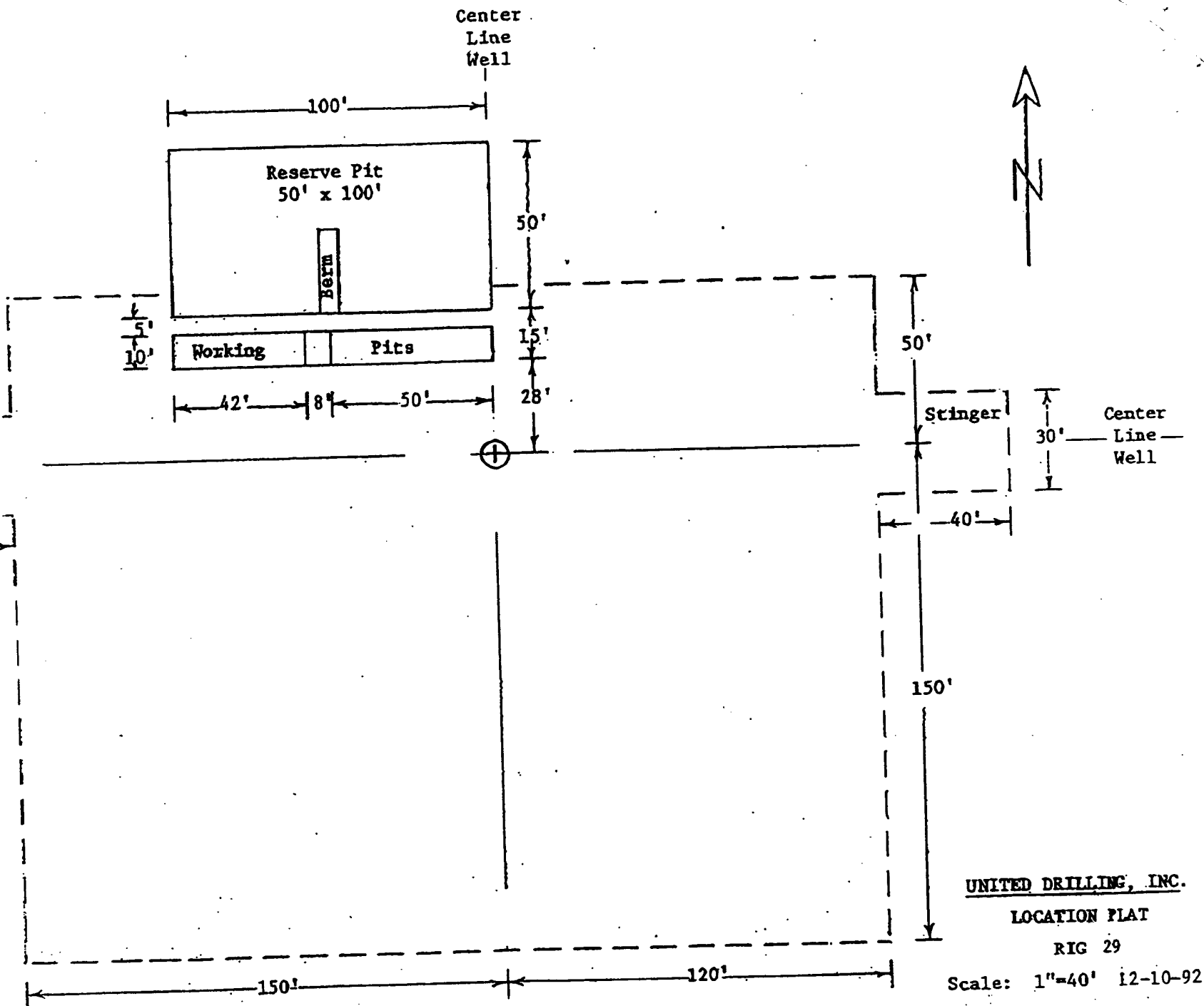
- A. The field representatives responsible for assuring compliance with approved surface use plan are:

	Office	Cell
District Engineer Bill Frye	817/810-1953	817-320-7919
Field Foreman Steve Almager	505/394-1485	505-631-0926

- 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., its 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: 10/31/06

  
\_\_\_\_\_  
Don Robinson  
Drilling Manager

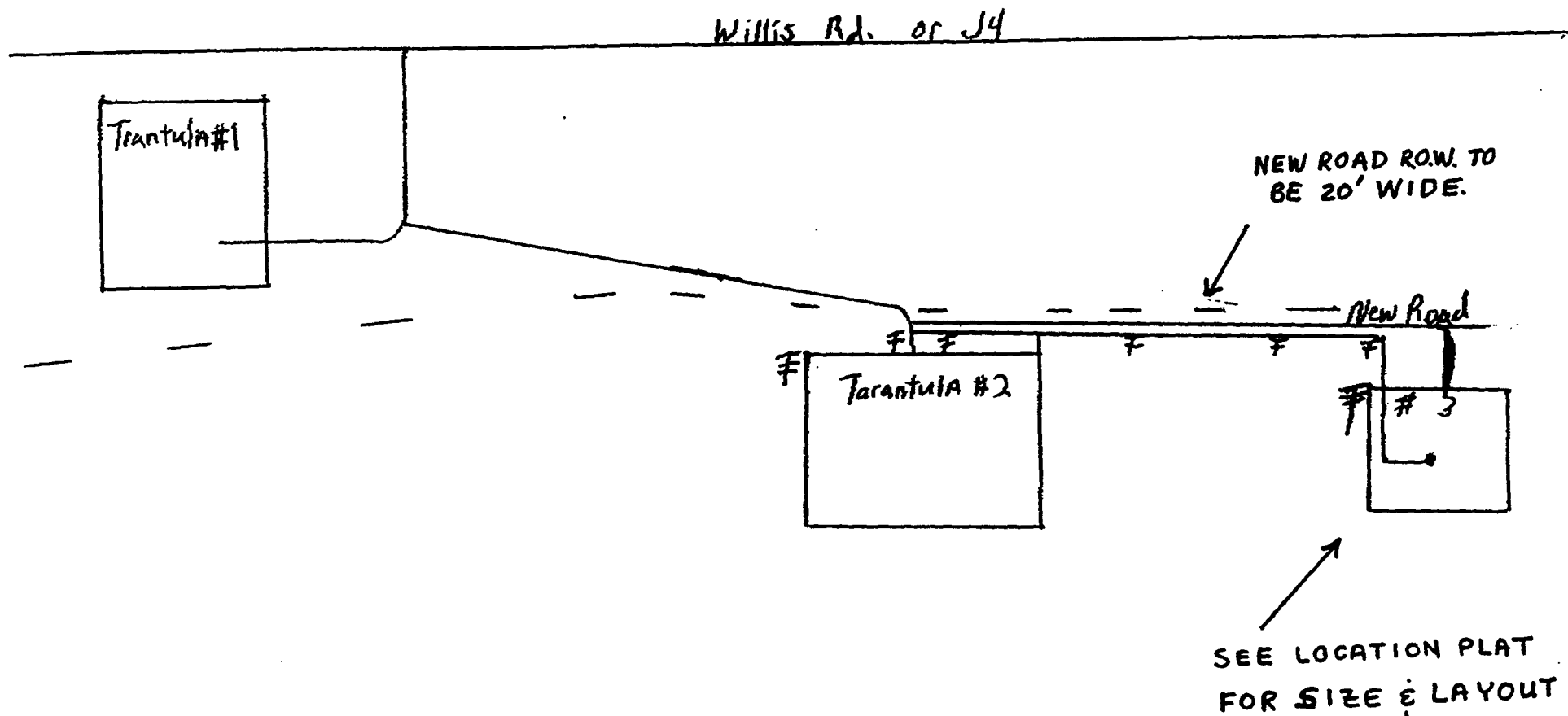


UNITED DRILLING, INC.

LOCATION PLAT

RIG 29

Scale: 1"=40' 12-10-92



Rig layout



Oil

Oil

WTR

WTR

Cat Walk.

Oil

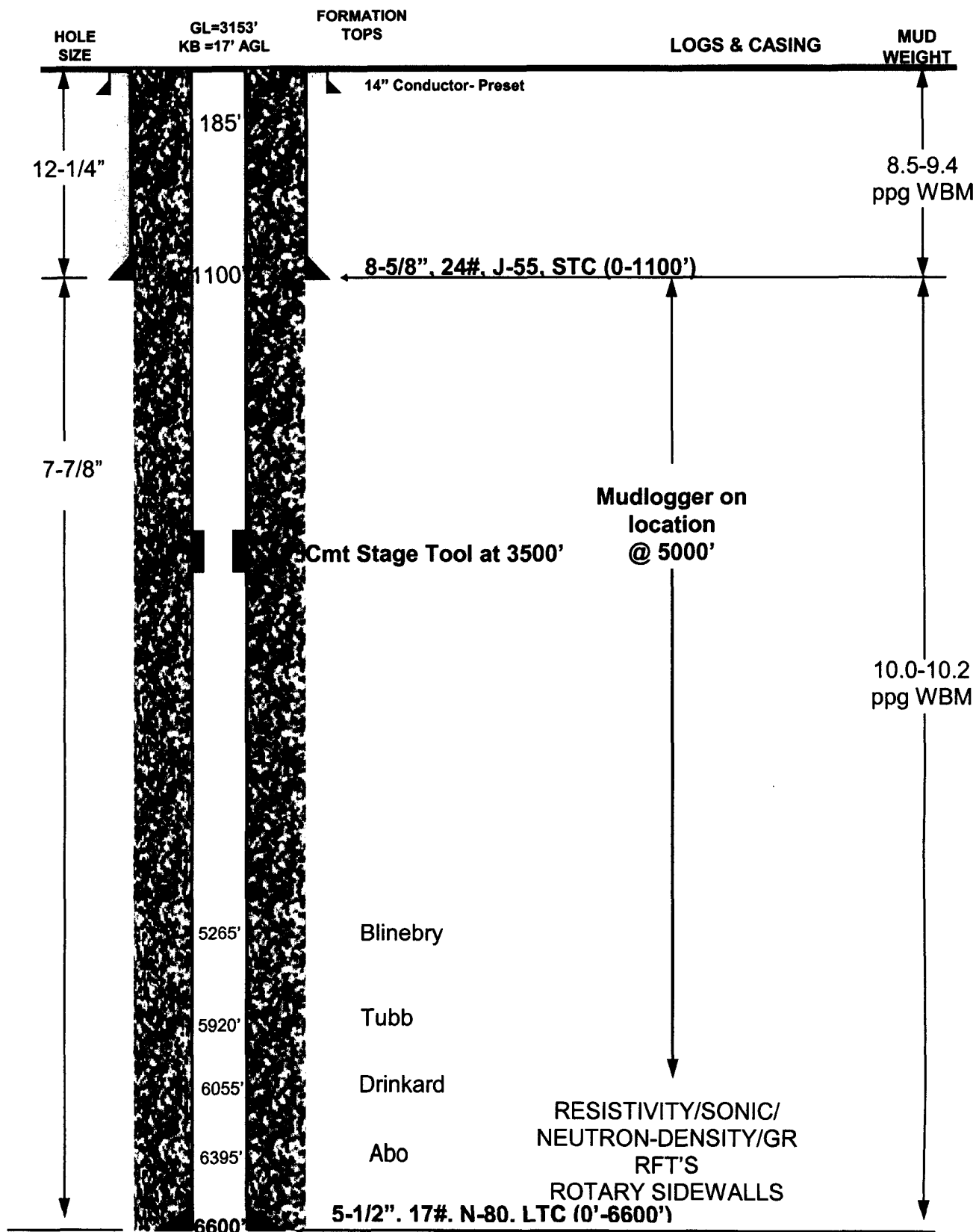
WTR

NOTE: 1 - 500-barrel oil tank & 1 - 500-barrel  
Water tank to be added at existing tank  
battery.

Rig layout

WELL : Tarantula 3 Fed #3  
SL : 2310' FSL & 330' FEL, Sec 3-T25S-R37E  
COUNTY : LEA COUNTY  
STATE : NEW MEXICO

AFE:  
FIELD: Justis  
TD: 6600'  
PERMIT NO:





Range Operating NM  
**Tarantula 3 Fed #3**  
**Lea County, NM**  
**Drilling Program**  
Prepared 8/26/2005

**PROPOSED DEPTH:** 6600' MD / 6600' TVD  
**GROUND ELEVATION:** 3153'  
**KB:** 17'

**LOCATION:** 2310' FSL & 330' FEL, Sec. 3-T25S-R378E, Lea County, NM

**ANTICIPATED PRODUCTIVE FORMATION:** Tubb-Drinkard

**API NO:**

**GENERAL:**

The Tarantula 3 Fed #3 will be a 6600' Tubb/Drinkard producer in Lea Co., New Mexico drilled on a daywork basis by United Rig #28. A 12-1/4" surface hole will be drilled to +/-1100'. 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 6600'. 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 surface and the tubing head installed.

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

Formation	Log Depth (ft)	MD (ft)
Upper Permian Queen Fm	-70 ft	3255 ft MD
Upper Permian Glorieta Fm	-1710 ft	4895 ft MD
Upper Permian Glorieta Fm	-1710 ft	4895 ft MD
Upper Permian Glorieta Fm	-1710 ft	4895 ft MD
Lower Permian Blinberry Fm	-2080 ft	5265 ft MD *
Lower Permian Blinberry Fm	-2080 ft	5265 ft MD *
Lower Permian Blinberry Fm	-2080 ft	5265 ft MD *
Lower Permian Drinkard Fm	-2870 ft	6055 ft MD *
Lower Permian Drinkard Fm	-2870 ft	6055 ft MD *
Lower Permian Drinkard Fm	-2870 ft	6055 ft MD *
PTD	-3415 ft	6600 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: (0-1100') - Bit, 2-8" DC, 10-6.25" DC's
- BHA #2: (1100'-5900') - Bit, (2) 6.25" DC's, IBS, 6,25" DC, IBS, (22) 6.25" DC's
- BHA #3: (5900'-6600') - Bit, (22) 6.25" DC's

The IBS's will be layed down prior to drilling the Tubb.

## **USE OF RT TOOL**

Two RT tools will be run, one 500' above the top of the collars and the other at 1500' above the top the first RT tool.

## **MUD PROGRAM**

INTERVAL	MUD WEIGHT	FUNNEL VIS.	API Fluid Loss
0' - 1100'	8.4 – 9.4	32-34	NC
1200' - 6000'	10.0	28	NC
6000' - 6600'	10.0 – 10.2	30-33	10cc

- 1) Level and build an all-weather location and access road.
- 2) MIRU United Rig #28. 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 11" mill tooth bit. BHA should consist of 3-8" drill collars and 6" drill collars. Drill to +/- 1100' 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 11" 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", 24.0#, J-55, ST&C (\$15.50/ft) as follows:

1-8-5/8" Texas Pattern Shoe  
1-8-5/8" Insert Float Collar  
1-8-5/8" x 12-1/4" Centralizer 10' above shoe  
1-8-5/8" x 12-1/4" 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 of the dry cements 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 650 sxs class "C" with 4 % gel, 2% CcCl<sub>2</sub>, @ 14.8ppg, 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" and top out cement. Have 1" pipe on location for possible top-out.
  - d) If cement falls, fill 12.25" 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 per NMOCD.
- 8) After Cementing casing, weld on 8-5/8" flange type casing head. Test BOP blind Rams & choke manifold 250# low & 3000# high. Pick up Bit #2 (7-7/8") & BHA , trip in hole, test BOP pipe rams 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 +/-6600; 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 RFTs.
- 11) Make a conditioning trip prior to running casing. Trip into hole with BHA and drill pipe, break circulation at 6740'. 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#, N-80, LT&C as follows:

- a) Float shoe (thread-lock)
- b) 2 jts. 5-1/2", 17#, N-80, LT&C casing (thread-lock)
- c) Float collar (thread-lock)
- d) 5-1/2", 17#, N-80, LT&C Casing to 3500'.
- e) Cement Stage Tool @ 3500'
- f) 5-1/2", 17#, N-80, 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 4500'.

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. **\*Note:** Expecting lost circulation while drilling, thereby justifying a two stage cement job.

**Stage One (6600' to 3500'):**

**600 SACKS**

Slurry: PVL Cement + 0.3% D-167 + 0.2% D-65 + 0.1% D-13 + 0.2% D46 + 4#/sk D-24 + 1#/sk D-44

Slurry Weight: 13.0 ppg      Slurry Yield: 1.41 cuft/sk      Water: 6.83 gals/sk

**Stage Two (3500' to Surface):**

**500 SACKS**

Slurry: PVL Slurry: 65/35 (Class C/POZ) + 6% D-20 + 5% D-44 + 0.3% S-1 + 4#/sk D-24 + 0.25#/sk

Slurry Weight: 12.4 ppg      Slurry Yield: 2.21 cuft/sk      Water: 12.11 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 1<sup>st</sup> Stage 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. Bleed off pressure and check for backflow. If negative, remove the cap and drop the opening bomb for the second stage job. Wait 30 minutes then attempt to open stage tool. Circulate a minimum of 2 hours prior to pumping second stage job.
  - c) Cement second stage. Bump plug with 500 psi over final displacement pressure and hold pressure for 15 minutes.
  - d) If cement does not circulate notify NMOCD office.
- 15) Release pressure and check for flow back. If floats are holding, continue to make preparations to hang 5-1/2" casing one 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:**

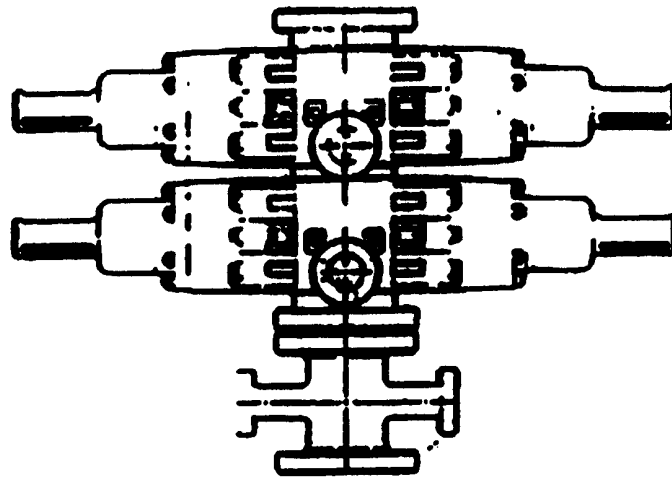
- Laboratory Blend:** Obtain thickening time, rheology, water loss, and compressive strengths of the laboratory cement blend with a water sample of the actual water to be used in cementing for each cement slurry to be pumped.
- Field Blend:** Obtain thickening time of the field cement blend with a water 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
Bill Frye	District Engineer	(817) 320-7919	(817) 741-4940	(817) 870-1953
Martin Emery	Chief Geologist	(817) 366-3693	(817) 430-4861	(817) 870-2601
Linda Stiles	Regulatory Tech	(817) 291-4618	(817) 561-5544	(817) 810-1908

<b>United, Roswell, NM</b>	<b>Rig Company</b>	<b>Angel Salazar</b>	<b>(505)-623-7730</b>
<b>United Rig #28</b>	Rig Floor		
	Tool Pusher		
<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>Nova Mud, Inc- Hobbs, NM</b>	Drig Mud	Dale Welch	(800) 530-8786
<b>National – Hobbs, NM</b>	Well Heads		(505) 393-9928
<b>Master Tubulars – Midland, TX</b>	Casing & Tubing	Randy Martin	(800) 682-8996
<b>TFH –Hobbs, NM</b>	Dirt Contractor		(505) 397-3270
<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>Riverside- Carlsbad, TX</b>	Water -		(505) 885-6663
<b>National –Hobbs, NM</b>	General Supplies		(505) 393-9928
<b>TFH –Hobbs, NM</b>	Fork Lift		(505) 397-3270
<b>Adobe Rentals</b>	Trailer, sewage, water		
<b>Abbot Brothers</b>	Conductor setting		
<b>RTO Sales &amp; Lease</b>	Satellite Internet		432-550-5678



# BLOW OUT PREVENTION EQUIPMENT



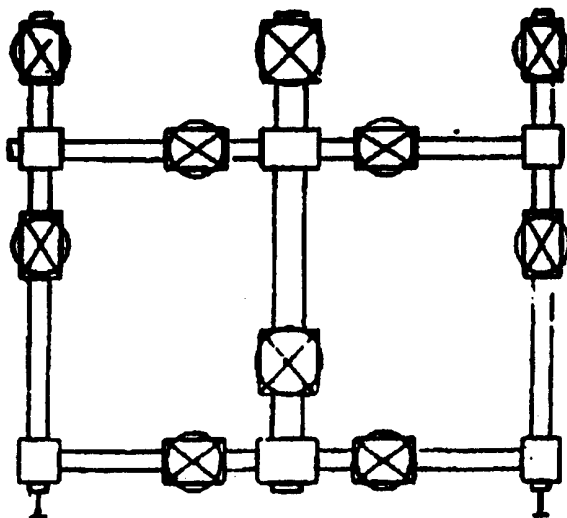
## BOP Stack

- 1 Rucker Sheffer "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

## CONDITIONS OF APPROVAL - DRILLING

Well Name & No. 3 – Tarantula 3 Fed  
Operator's Name: Range Operating New Mexico, Inc.  
Location: 2310FSL, 330FEL, Section 3, T-25-S, R-37-E  
Lease: NMLC032592A

### I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 234-5972 or (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: 8-5/8 inch 5-1/2 inch

C. BOP tests

2. A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan should be activated prior to drilling into the Yates Formation. A copy of the plan shall be posted at the drilling site. **H<sub>2</sub>S has been reported quite commonly in the area. It has been reported in the Yates and Seven Rivers with a report in Sec. 5, T-25-S, R-37-E of 1400 ppm in a gas stream and 350 ppm in STVs.**

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.

6. A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

7. Gamma-Ray/Neutron logs shall be run from the base of the Salado Formation to the surface; cable speed not to exceed 30 feet per minute.

### II. CASING:

1. The 8-5/8 inch surface casing shall be set a minimum of 25 feet into the Rustler Anhydrite approximately 1100 feet, below usable water and cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.

#### **Possible lost circulation in Yates formation.**

2. The minimum required fill of cement behind the 5-1/2 inch production casing is cement shall circulate to surface.

### **III. PRESSURE CONTROL:**

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

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) is 3M psi.

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

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

**Engineer on call phone: 505-706-2779**

**WWI 112906**

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: <u>Range Operating New Mexico, Inc.</u> Telephone: <u>(817) 810-1908</u> e-mail address: <u>lstiles@rangeresources.com</u>	
Address: <u>777 Main Street Suite 800 Fort Worth TX 76102</u>	
Facility or well name: <u>Trantula 3 Federal 3</u> API #: <u>30-025-38208</u> U/L or Qtr/Qtr <u>Sec 3 T 25S R 37E</u>	
County: <u>Lea</u> Latitude <u>32°15'83.06" N</u> Longitude <u>103°15'27.96" 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 type="checkbox"/> Thickness <u>12</u> mil Clay <input type="checkbox"/> Pit Volume <u>14,000</u> bbl	<b>Below-grade tank</b> Volume: _____ bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not: _____
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 X (10 points) X 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 X (0 points) X
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet (20 points) 200 feet or more, but less than 1000 feet (10 points) 1000 feet or more X (0 points) X
<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:

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: 12-07-2006

Printed Name/Title Linda C. Stiles Sr. Engineering Tech Signature Linda C. Stiles

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 CHRIS WILLIAMS / DIST. SUOV Signature Chris Williams Date: 12/08/06

