

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

Form 3160-3  
(April 2004)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED

FEB 21 2006

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. NM NM 98791	
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator Parallel Petroleum Corporation		7. If Unit or CA Agreement, Name and No.	
3a. Address 1004 North Big Spring, Suite 400 Midland, Texas		8. Lease Name and Well No. Match Box Federal #1	
3b. Phone No. (include area code) 432/684-3727		9. API Well No. 30-015-34640	
4. Location of Well (Report location, depth, and in accordance with any State requirements.) At surface 560' FSL and 1880' FEL - Morrow At proposed prod. zone Alternate Horizontal Wolfcamp 990' FSL and 1880' FEL		10. Field and Pool, or Exploratory Hope, Penn, South	
11. Sec., T. R. M. or Blk. and Survey or Area 1-19S-21E		12. County or Parish Eddy	
13. State NM		14. Distance in miles and direction from nearest town or post office* 9 miles south of Hope, New Mexico	
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 1,922.48	
17. Spacing Unit dedicated to this well 320		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	
19. Proposed Depth 7700'		20. BLM/BIA Bond No. on file NMB000265	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) GL 4143'		22. Approximate date work will start* 02/01/2006	
23. Estimated duration 30 days		24. Attachments Roswell Controlled Water Basin	

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>Deane Durham</i>	Name (Printed/Typed) Deane Durham	Date 17 NOV 2005
Title Engineer, Parallel Petroleum Corporation		
Approved by (Signature) /s/ Joe G. Lara	Name (Printed/Typed) /s/ Joe G. Lara	Date FEB 16 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)

WITNESS: 13<sup>38</sup> PMT SOB

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

If earthen pits are used in  
association with the drilling of this  
well, an OCD pit permit must be  
obtained prior to pit construction.

DISTRICT I  
1625 N. French Dr., Hobbs, NM 88240

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised August 15, 2000  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III  
1000 Rio Brazos Rd., Artec, NM 87410

DISTRICT IV  
2040 South Pacheco, Santa Fe, NM 87505

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 78600	Pool Name Hope, Penn., South
Property Code	Property Name MATCH BOX FEDERAL	Well Number 1
OGRID No.	Operator Name PARALLEL PETROLEUM CORPORATION	Elevation 4143'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	1	19 S	21 E		560	SOUTH	1880	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	1	19 S	21 E		660	NORTH	1880	EAST	EDDY

Dedicated Acres 320	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<p>Project Area</p>	<p>Producing Area</p>	<p>Coordinate Table</p> <table><thead><tr><th>Description</th><th>Plane Coordinate</th></tr></thead><tbody><tr><td>Match Box Federal #1</td><td>X = 373,436.7</td></tr><tr><td>Surface Location</td><td>Y = 612,680.9</td></tr><tr><td>Match Box Federal #1</td><td>X = 373,438.2</td></tr><tr><td>Penetration Point</td><td>Y = 613,110.6</td></tr><tr><td>Match Box Federal #1</td><td>X = 373,447.4</td></tr><tr><td>Bottom Hole Location</td><td>Y = 616,761.5</td></tr></tbody></table>	Description	Plane Coordinate	Match Box Federal #1	X = 373,436.7	Surface Location	Y = 612,680.9	Match Box Federal #1	X = 373,438.2	Penetration Point	Y = 613,110.6	Match Box Federal #1	X = 373,447.4	Bottom Hole Location	Y = 616,761.5	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Deane Durham</i> Signature Deane Durham Printed Name Engineer Title 11-17-05 Date</p> <p>SURVEYOR CERTIFICATION</p> <p>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 upervision and that the same is true and orrect to the best of my belief.</p> <p>October 26, 2005 Date Surveyed Signature &amp; Seal of Professional Surveyor W.O. Num: 2005-0969 Certificate No. MACON McDONALD 12185</p>
Description	Plane Coordinate																
Match Box Federal #1	X = 373,436.7																
Surface Location	Y = 612,680.9																
Match Box Federal #1	X = 373,438.2																
Penetration Point	Y = 613,110.6																
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Bottom Hole Location	Y = 616,761.5																

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Form C-144  
June 1, 2004

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

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

**Pit or Below-Grade Tank Registration or Closure**

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☒

Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

Operator: **Parallel Petroleum Corporation** Telephone: **432-684-3905** e-mail address: **gmiller@hec-enviro.com**  
Address: **1004 N. Big Spring Street, Suite 400, Midland, Texas 79701**  
Facility or well name: **Match Box Federal #1** API #: \_\_\_\_\_ U/L or Qtr/Qtr **SW/4 of the SE/4** Sec **1** T **19S** R **21E**  
County: **Eddy** Latitude **32° 41' 01.27" N** Longitude **104° 44' 40.88" W** NAD: 1927 ☒ 1983 ☐  
Surface Owner: Federal ☐ State ☐ Private ☒ Indian ☐

**Pit**

Type: Drilling ☒ Production ☐ Disposal ☐  
Workover ☐ Emergency ☐  
Lined ☒ Unlined ☐  
Liner type: Synthetic ☒ Thickness **12** mil Clay ☐  
Pit Volume **10,000** bbl

**Below-grade tank**

Volume: \_\_\_\_\_ bbl Type of fluid: \_\_\_\_\_  
Construction material: \_\_\_\_\_  
Double-walled, with leak detection? Yes ☐ If not, explain why not.

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NOV 18 2005  
SOUTHWESTERN

Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.) <b>750'</b>	Less than 50 feet	(20 points)	
	50 feet or more, but less than 100 feet	(10 points)	
	100 feet or more	( 0 points)	<b>0</b>
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes	(20 points)	
	No	( 0 points)	<b>0</b>
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet	(20 points)	
	200 feet or more, but less than 1000 feet	(10 points)	
	1000 feet or more	( 0 points)	<b>0</b>
<b>Ranking Score (Total Points)</b>			<b>0</b>

**If this is a pit closure:** (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (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: **11-17-05**

Printed Name/Title **Gary Miller, Agent** Phone **432/682/4559**

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 **Mike Bratcher**

**Asst Dir**

Signature **Mike Bratcher**

Date: **11/22/05**

## STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

Parallel Petroleum Corporation  
1004 N. Big Spring St.  
Suite 400  
Midland, Texas 79701

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

Lease No: NM NM 98791

Legal Description of Land: SHL: 560 FSL AND 1880 FEL, SEC 1, 19S, 21E  
Eddy County, New Mexico

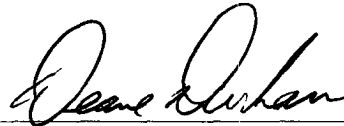
Formation(s) (if applicable: Morrow/Wolfcamp

Bond Coverage: \$25,000 statewide bond of Parallel Petroleum Corporation

BLM Bond File No: NMB000265

17 NOV 2005

Date



Name: Deane Durham

Title: Engineer

**ATTACHMENT TO FORM 3160-3**  
**MATCH BOX FEDERAL #1**  
**Surface Hole Location**  
**560 FSL AND 1880 FEL, SEC 1, 19S, 21E**  
**Alternate Bottom Hole Location**  
**660 FNL AND 1880 FEL, SEC 1, 19S, 21E**  
**EDDY COUNTY, NEW MEXICO**

**DRILLING PROGRAM**

**This well is designed as a vertical Morrow test. In the event that the Morrow is found to be non-productive, a horizontal test in the Wolfcamp formation will be drilled.**

1. GEOLOGIC NAME OF SURFACE FORMATION

San Andres

2. ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS

Glorieta 1775'(+ 2368')  
Tubb 2785'(+1358')  
Abo Shale 3425' (+658')  
Abo Carbonate 3545' (+598')  
Wolfcamp 4500' (-357')  
Wolfcamp Shale 4690'(-550')  
Penn Cisco 6010' (-1857')  
Canyon 6475' (-2332')  
Strawn 6890' (-2747')  
Atoka 7275' (-3132')  
Morrow 7400' (-3257')  
Miss. Chester 7800'(-3657')

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

Fresh water                      790'  
Oil and Gas                      Morrow 7400' (-3257') to 7525'(-3382')  
Alternate Horizontal Completion  
Oil and Gas                      Wolfcamp 4500' (-357')  
No H<sub>2</sub>S gas should be encountered

## **MATCH BOX FEDERAL #1**

### **Page 2**

#### **4. CASING AND CEMENTING PROGRAM**

<u>Casing Size</u>	<u>From</u> <u>To</u>	<u>Weight</u>	<u>Grade</u>	<u>Joint</u>
20" conductor	0'-40'			
13 3/8"	0' - 300'	40#	H-40	STC
9 5/8"	300' - 1300'	36#	J-55	LTC
7"	1,300' - 7,700'	23#	J-55	LTC

Horizontal casing program for Production String

7"	1300' - 4400'	23#	J-55	LTC
4 1/2" Liner	3,700' -	11.6#	N-80	LTC

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

#### **Primary Drilling Procedure**

- Set 20" conductor pipe at 40' with a rathole unit.
- Drill 17 1/2" surface hole with rotary equipment to an approximate depth of 300', using a fresh water gel spud mud. Set 13 3/8", 40# H-40 casing with 440 sx Class C cement (circulate to surface, 1" if necessary).
- Drill 12 1/4" intermediate hole to an approximate depth of 1300', using fresh water and viscous sweeps for hole cleaning. Set 9 5/8", 36# J-55 casing with 460 sx, Class C cement (lead will be 50/50 Poz, circulate to surface, 1" if necessary).
- Drill 8 3/4" production hole to 7700', using cut brine to an approximate depth of 3400' and a starch mud system to TD. Set 7" 23# J-55 casing at TD with 1070 sx Class C cement with the estimated top of cement at 3500' (lead 50/50 Poz).

#### **Alternate Drilling Procedure ( if Morrow is Non-Productive)**

- Plug lower portion of the hole, per OCD/BLM specifications.
- Set 7" 23# J-55 casing at the top of the Wolfcamp zone of interest at an approximate depth of 4000' with 600 sx, Class C.
- Dress CMT to kick off point at approximately 4100', oriented at 0 degree (grid) azimuth.
- Build angle at 15 degrees per 100' to 90 degrees and hold.
- Drill 6 1/8" horizontal drain hole to a terminus of 660' FNL (8395' MD).
- Run 4 1/2" 11.6# N-80 liner from TD back to 3900', cement with 500 sx Class C Rig Down Rotary Tools

## **MATCH BOX FEDERAL #1**

### **Page 3**

#### 5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL

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

A BOP sketch is attached.

#### 6. TYPES AND CHARACTERS OF THE PROPOSED MUD SYSTEM

- a. Spud and drill to 300' with fresh water gel spud mud for surface string.
- b. The intermediate section from 300' to 1,300' will be 8.3 ppg Fresh Water system and viscous sweeps for hole cleaning.
- c. The production section from 1,300' to 3,400' will utilize a cut brine mud system.
- d. The remaining production section from 3,400' to TD will be a starch mud system with mud weight sufficient to control formation pressures.

#### 7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT

None required.

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

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

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

None anticipated.

BHP expected to be 1,100 psi.

#### 10. ANTICIPATED STARTING DATE:

Is planned that operations will commence around first quarter of 2006 with drilling and completion operation lasting about 30 days.

**SURFACE AND OPERATIONS PLAN FOR  
DRILLING, COMPLETION, AND PRODUCING**

**PARALLEL PETROLEUM CORPORATION  
MATCH BOX FEDERAL #1  
SHL: 560' FSL AND 1880' FEL, SEC 1, 19S, 21E  
EDDY COUNTY, NEW MEXICO**

LOCATED:

9 miles South of Hope, New Mexico

OIL & GAS LEASE:

NM NM 98791

RECORD LESSEE:

Nearburg Exploration Company, LLC  
3300 N. A Street, Bldg. 2 #120  
Midland, Texas 79705

BOND COVERAGE:

\$25,000 statewide bond # NMB000265 of Parallel Petroleum Corporation

ACRES IN LEASE:

1922.48

FEE SURFACE OWNER:

Barbra Runyon Ranch  
P.O. Box 2468  
Roswell, NM 88202  
Jim Bob Burnet, Ranch Manager, 505-484-3141

POOL:

Primary Objective - Morrow (Gas)  
Contingency Objective – Wolfcamp (Camp)



## **MATCH BOX FEDERAL #1**

**Page 2**

### EXHIBITS:

- A. Area Road Map
- B. Drilling Rig Layout
- C. Pad Elevation Plat
- D. Vicinity Map
- E. Area Production Map
- F. Topographic & Location Verification Map
- G. Well Location & Acreage Dedication Map (NMOCD Form C-102)
- H. NMOCD Form C-144, Pit Registration (Original forwarded to NMOCD)
- I. Blow Out Preventer (BOP) Schematic
- J. Choke Manifold Schematic
- K. Estimated Horizontal Survey Calculation Program
- L. Estimated Wellbore Plot

#### 1. EXISTING ROADS

- A. Exhibits A and D are area road maps showing existing roads in the vicinity of the site.
- B. Exhibit F is a topographic map of the location showing existing roads and the proposed new access road.

#### 2. ACCESS ROADS

- A. Length and Width  
The access road will be built as shown on Exhibit D. The new access road will come off of an existing access road for the Box Top Federal 1921#1 site and will be approximately 3,555' in length and will be 16' to 24' wide.
- B. Surface Material  
Caliche from a commercial source.
- C. Maximum Grade  
Less than five percent.
- D. Turnouts  
Two turnouts will be constructed on the access road.
- E. Drainage Design  
No drainage issues should be encountered.

## **MATCH BOX FEDERAL #1**

### **Page 3**

F. Culverts

None necessary.

G. Gates and Cattle Guards

A cattle guard will be installed in the ranch fence located at the midpoint of the new access road. The cattle guard may be replaced with a gate when drilling and completion operations are have been completed.

3. LOCATION OF EXISTING WELLS

Existing wells in the immediate area are shown in Exhibit "E".

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

Necessary production facilities for this well will be located on the well pad.

5. LOCATION AND TYPE OF WATER SUPPLY

It is not contemplated that a water well will be drilled. Water necessary for drilling will be purchased from the Runyon Ranch from an existing well 1700' east south east of the proposed well site or will be trucked in from a commercial source. A poly flow line will be used to deliver the water to the site if the Runyon well is utilized.

6. METHODS OF HANDLING WASTE DISPOSAL

A. Drilling fluids will be allowed to dry in the drilling pits until the pits are closed.

B. Water produced during tests will be disposed of in the drilling pits.

C. Oil produced during tests will be stored in test tanks.

D. Trash will be contained in a trash trailer and removed from well site.

E. All trash and debris will be removed from the well site within 30 days after finishing drilling and/or completion operations.

F. The reserve pit will be closed as per BLM and NMOCD regulations and guidelines. This will include leaving the drill cuttings in place in the pit, allowing them to dry, and covering the pit with at least 3' of backfill while not disturbing the pit liner.

## **MATCH BOX FEDERAL #1**

### **Page 4**

#### 7. ANCILLARY FACILITIES

None required.

#### 8. WELL SITE LAYOUT

Exhibit B shows the relative location and dimensions of the well pad, mud pits, reserve pit, and the location of major rig components.

#### 9. PLANS FOR RESTORATION OF THE SURFACE

A. After completion of drilling and/or completion operations, all equipment and other material not needed for operations will be removed. The well site will be cleaned of all trash and junk to leave the site in as aesthetically pleasing condition as possible.

B. After abandonment, all equipment, trash, and junk will be removed and the site will be clean.

#### 10. OTHER INFORMATION

##### A. Topography

The land surface at the well site is rolling native grass land with a regional slope being to the south and east.

##### B. Soil

The limited topsoil at the well site is rocky, sandy soil.

##### C. Flora and Fauna

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

##### D. Ponds and Streams

Catclaw Draw, an intermittent stream which flows west to east, is located 700' south of the site. There are no other rivers, lakes, ponds, or streams in the area.

##### E. Residences and Other Structures

The Barbra Runyon Ranch house is located 1700' east south east of the proposed well site.

**MATCH BOX FEDERAL #1**

**Page 5**

F. Archaeological, Historical, and Cultural Sites

See archaeological report # SNMAS-05NM-1952

submitted by: Southern New Mexico Archaeological Services, Inc.,  
P.O. Box 1  
Bent, New Mexico 88314 Phone 505-67-4797

G. Land Use

Grazing

H. Surface Ownership

Barbra Runyon Ranch

11. OPERATOR'S REPRESENTATIVE

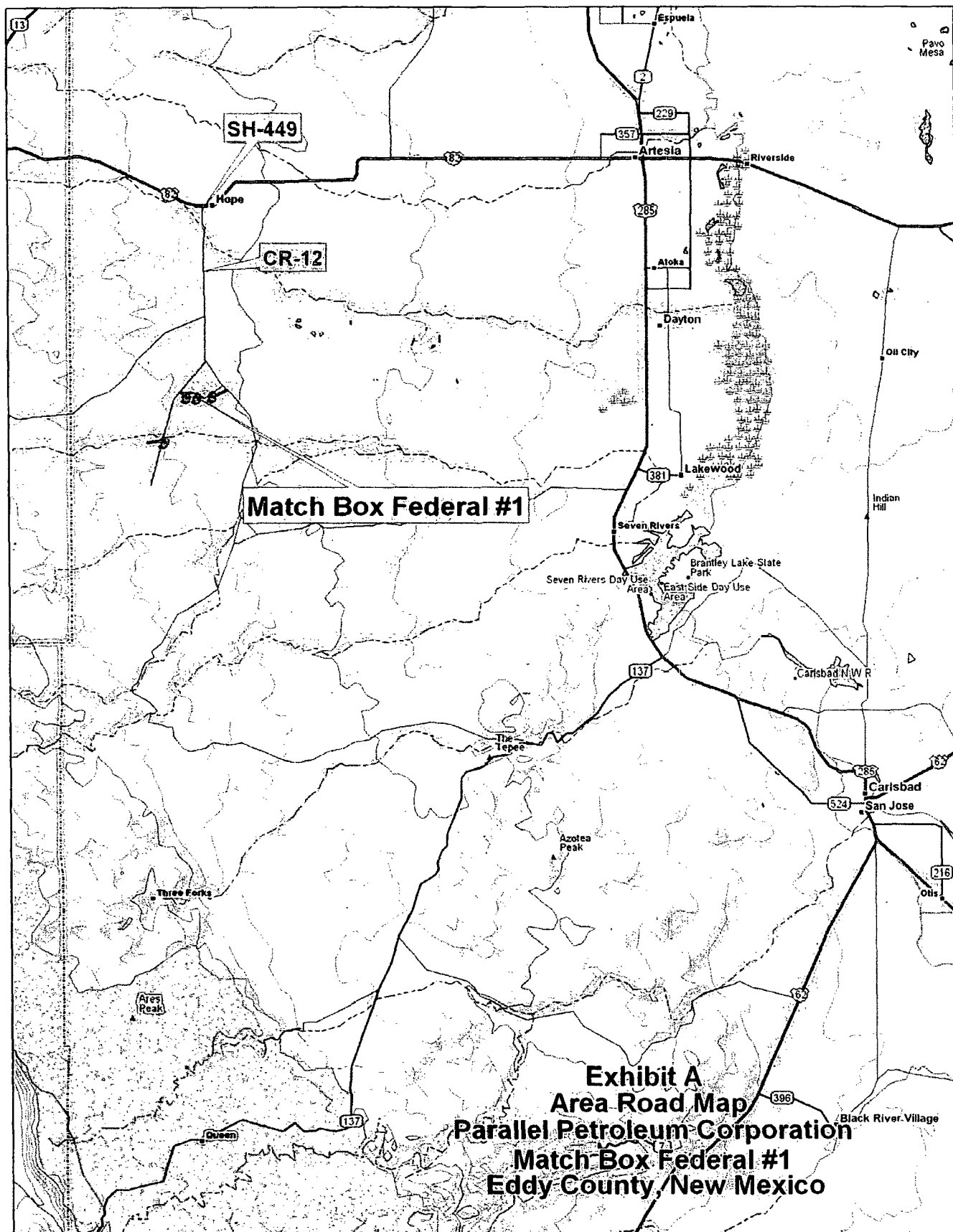
Deane Durham, Engineer  
Parallel Petroleum Corporation  
1004 North Big Spring Street, Suite 400  
Midland, Texas 79701  
Office: (432) 684-3727

12. CERTIFICATION

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

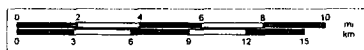
17 NOV 2005  
Date

Deane Durham  
Name: Deane Durham  
Title: Engineer



**DELORME**

© 2002 DeLorme. 3-D TopoQuads ©. Data copyright of content owner.  
www.delorme.com



9.3°E

DOUBLE HORESHOE RESERVE PIT

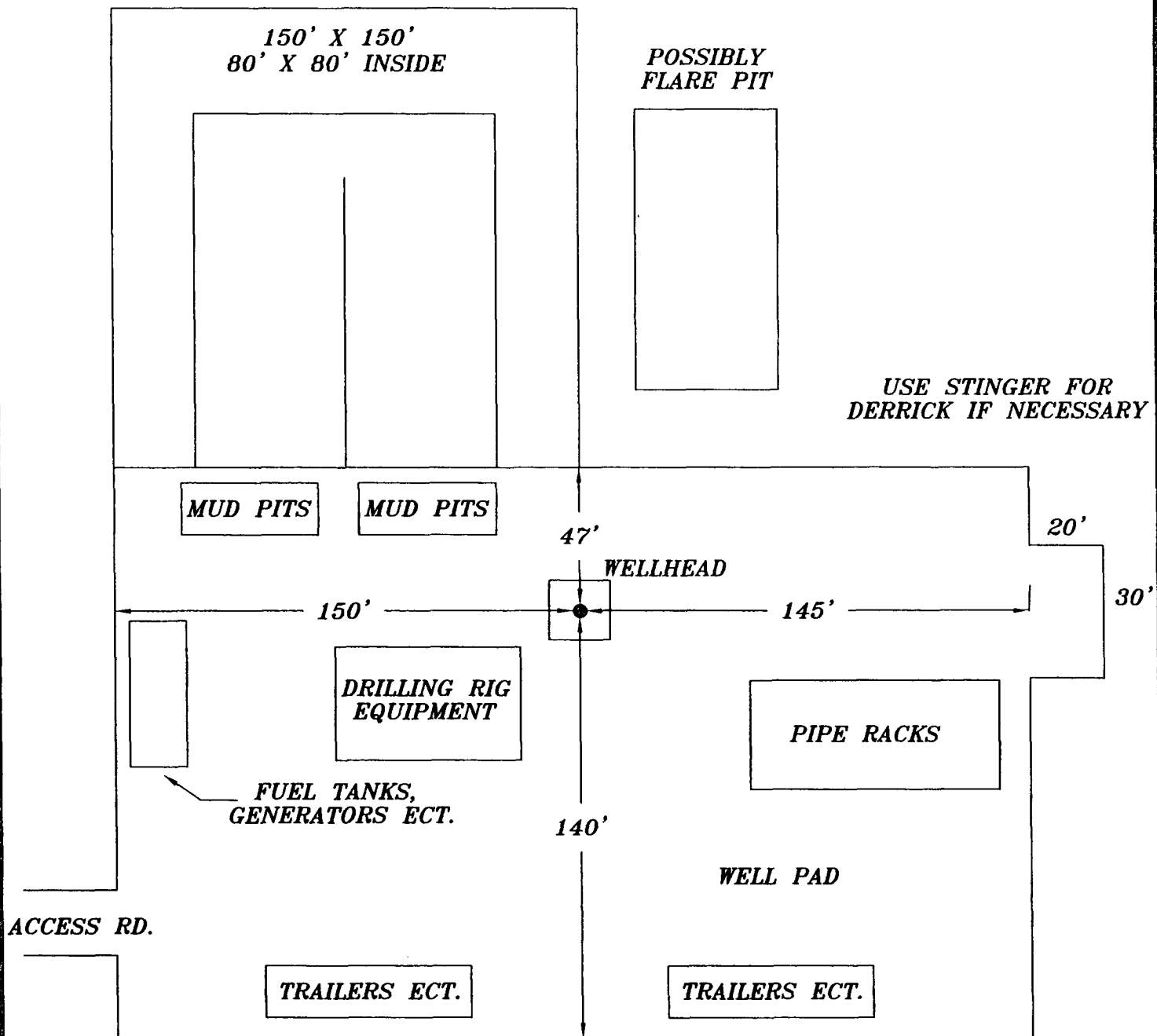


EXHIBIT B

DATE:  
11/3/05

DWN. BY:  
JJ

FILE:  
C:\PARALLEL\2425\  
DRILLING RIG LAYOUT-2

PARALLEL PETROLEUM  
DRILLING RIG LAYOUT

HIGHLANDER ENVIRONMENTAL CORP.  
MIDLAND, TEXAS

NOT TO SCALE

# SECTION 1, TOWNSHIP 19 SOUTH, RANGE 21 EAST, N.M.P.M.

EDDY COUNTY

NEW MEXICO

L-2005-0969-A

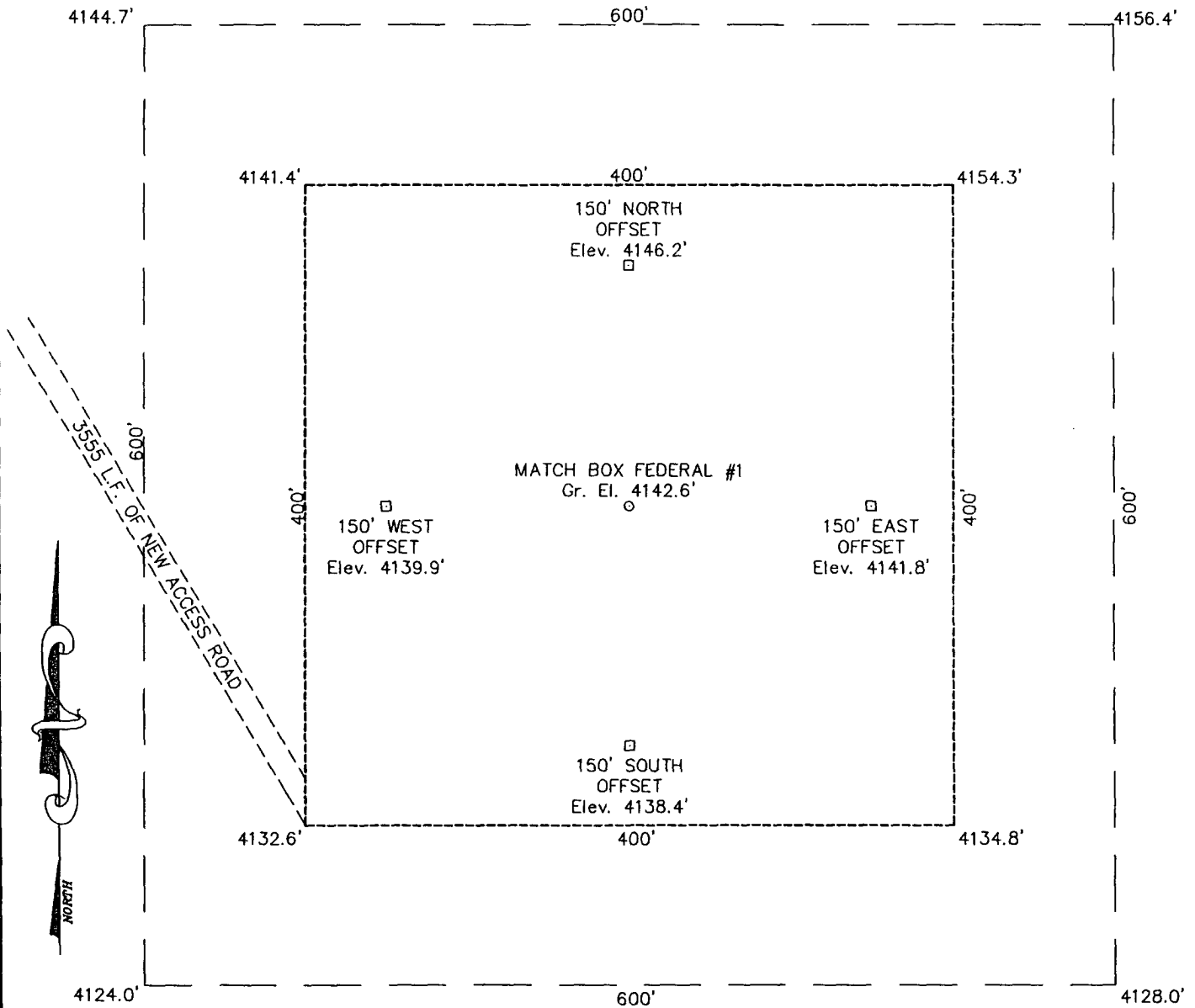
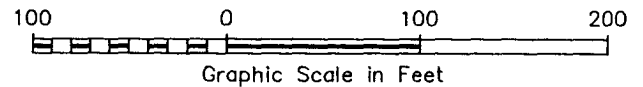


Exhibit "C"

## DRIVING DIRECTIONS

FROM THE INTERSECTION OF U.S. HIGHWAY 82 AND STATE HIGHWAY 449 IN HOPE, NM GO SOUTH ON SAID STATE HIGHWAY 449 2.2 MILES TO THE END OF SAID STATE HIGHWAY 449 AND THE BEGINNING OF COUNTY ROAD 12, THEN CONTINUE SOUTH ANOTHER 4.8 MILES (7.0 TOTAL) TO A FORK IN THE ROAD, THE INTERSECTION OF SAID COUNTY ROAD 12 AND COUNTY ROAD 20 (BRONC ROAD), THEN GO SOUTHWEST ALONG SAID COUNTY ROAD 20 (BRONC ROAD) 2.0 MILES TO A POINT WHERE AN ACCESS ROAD BEGINS ON SOUTH (LEFT SIDE OF SAID COUNTY ROAD 20, THEN GO SOUTHEAST ALONG SAID ACCESS ROAD 0.2 MILE TO A POINT WHERE A NEW ACCESS ROAD BEGINS AT THE NORTH SIDE OF SAID ROAD, THEN GO EAST AND SOUTHEAST ALONG SAID NEW ACCESS ROAD 0.7 MILE TO THE PROPOSED LOCATION.



## PARALLEL PETROLEUM CORPORATION

### MATCH BOX FEDERAL #1

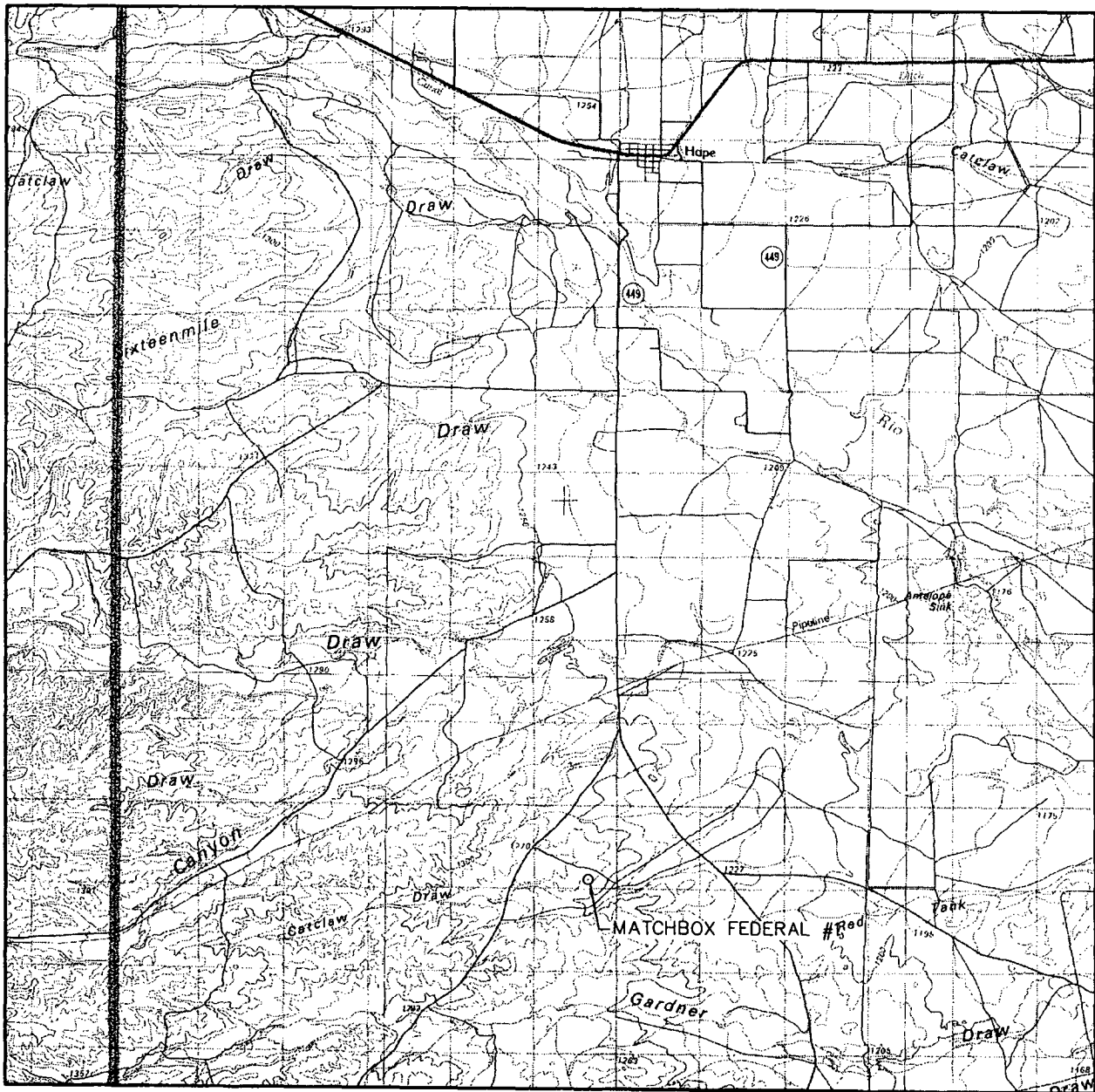
Located 560' FSL & 1880' FEL, Section 1  
Township 19 South, Range 21 East, N.M.P.M.  
Eddy County, New Mexico

**WEST**  
**COMPANY**  
of Midland, Inc.

110 W. LOUISIANA, STE. 110  
MIDLAND TEXAS, 79701  
(432) 687-0865 - (432) 687-0868 FAX

Drawn By: LVA	Date: November 1, 2005
Scale: 1"=100'	Field Book: 303 / 61-71
Revision Date:	Quadrangle: Holt Tank
W.O. No: 2005-0969	Dwg. No.: L-2005-0969-A

# VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 1 TWP. 19-S RGE. 21-E

SURVEY \_\_\_\_\_ N.M.P.M.

COUNTY \_\_\_\_\_ EDDY

DESCRIPTION 560' FSL & 1880' FEL

ELEVATION 4143'

OPERATOR PARALLEL PETROLEUM CORPORATION

LEASE MATCH BOX FEDERAL



Exhibit "D"

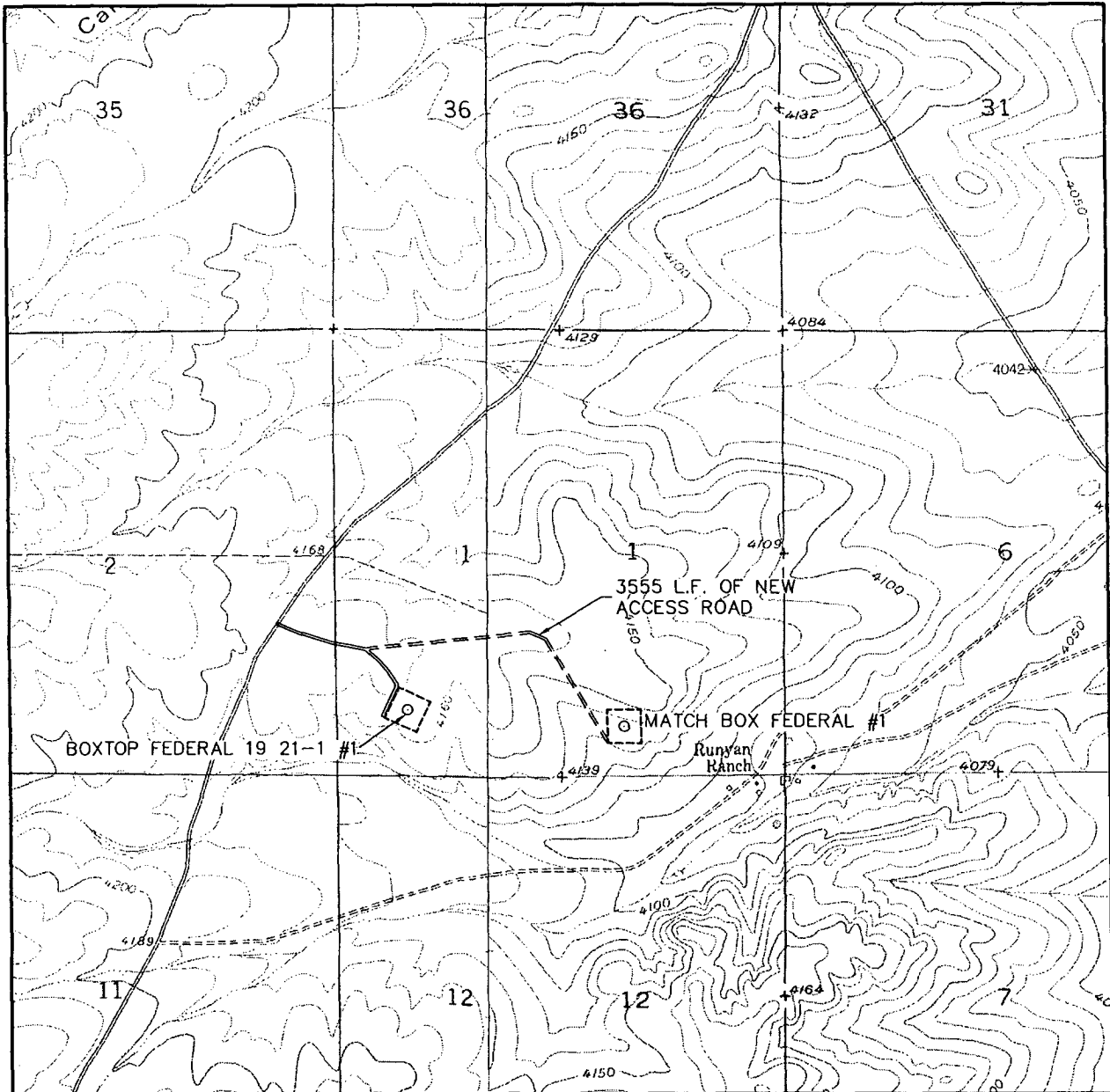
**WEST  
COMPANY**  
of Midland, Inc.

110 W. LOUISIANA, STE. 110  
MIDLAND TEXAS, 79701  
(432) 687-0865 - (432) 687-0868 FAX





# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:  
HOLT TANK - 20'

SEC. 1 TWP. 19-S RGE. 21-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 560' FSL & 1880' FEL

ELEVATION 4143'

OPERATOR PARALLEL PETROLEUM CORPORATION

LEASE MATCH BOX FEDERAL

U.S.G.S. TOPOGRAPHIC MAP  
HOLT TANK, N.M.



Exhibit "F"

**WEST  
COMPANY**  
of Midland, Inc.

110 W. LOUISIANA, STE. 110  
MIDLAND TEXAS, 79701  
(432) 687-0865 - (432) 687-0868 FAX

# MINIMUM BOP SCHEMATIC

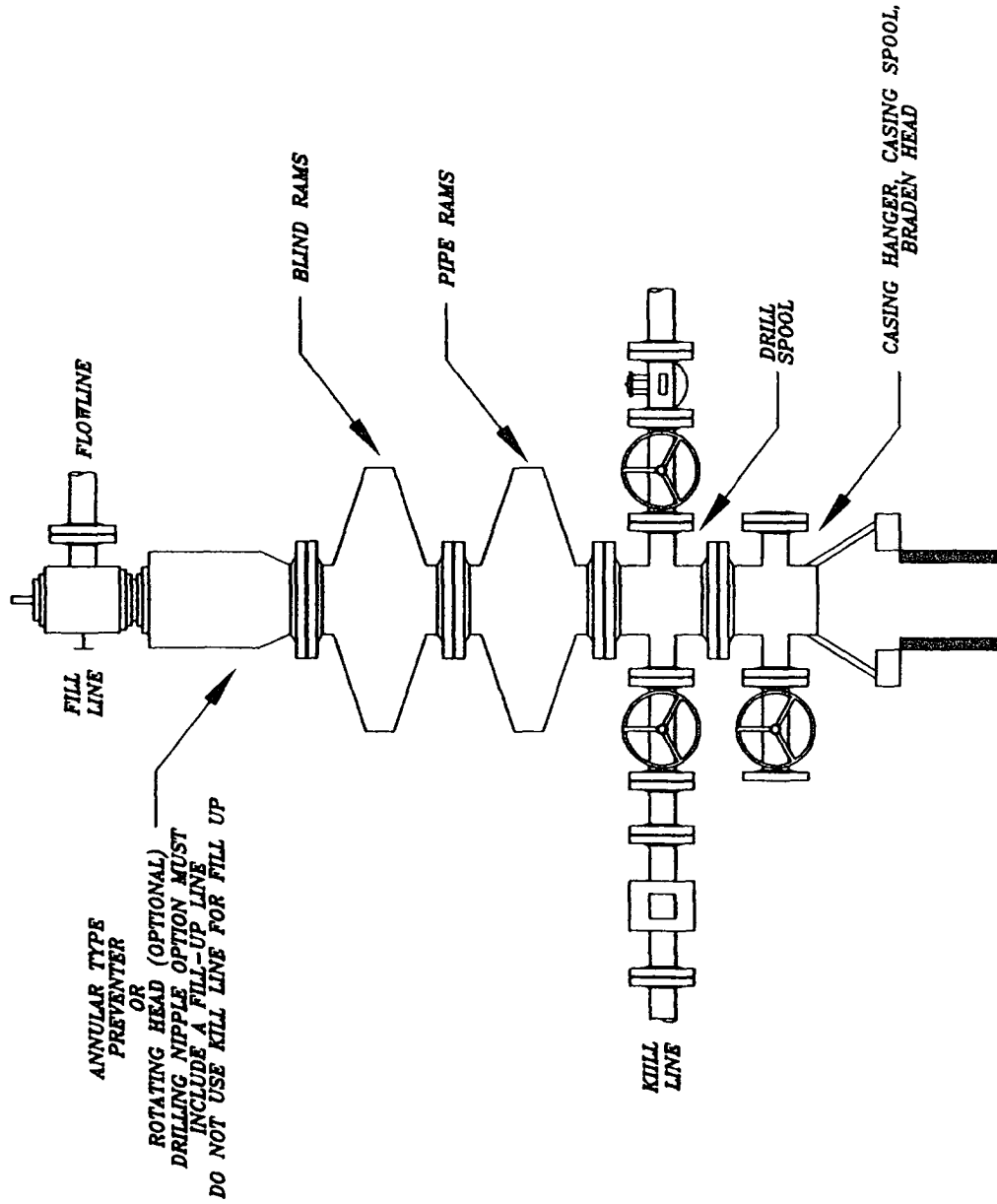


EXHIBIT I

PARALLEL PETROLEUM  
BOP SCHEMATIC

HIGHLANDER ENVIRONMENTAL CORP.  
MIDLAND, TEXAS

DATE:	7/26/05
DRAWN BY:	JJ
FILE:	10-ANNUAL/2005 BOP SCHEMATIC

NOT TO SCALE

[illegible]

**EXHIBIT 1**

**PARALLEL PETROLEUM  
CHOKE MANIFOLD**

**HIGHLANDER ENVIRONMENTAL CORP.**  
**MIDLAND, TEXAS**

# **PARALLEL** SURVEY CALCULATION PROGRAM PETROLEUM CORPORATION

OPERATOR:	Parallel Petroleum Corporation		Supervisors:	
WELL:	Match Box Federal #1			
LOCATION:	Sec. 1 T-19-S R-21-E			
API NUMBER:				
COMMENTS:				
			MAG DEC. (-/+)	
			GRID CORR. (-/+)	
			TOTAL CORR. (-/+)	0.0

DATE: 11/09/05      TIME: 9:08 AM      TRUE TO GRID ☐

MINIMUM CURVATURE CALCULATIONS(SPE-3362)								PROPOSED DIRECTION	0.0	TARGET TRACKING TO CENTER	
SVY NUM	MD	INC	GRID AZM	TVD	VERT SECT	N-S	E-W	DLS/ 100		ABOVE(+) BELOW(-)	RIGHT(+) LEFT(-)
TIE	0	0.0	0.0	0.0	0.0	0.0	0.0				
1	4118	0.0	0.0	4118.0	0.0	0.0	0.0	0.0		382.0	0.0
2	4128	1.5	0.0	4128.0	0.1	0.1	0.0	15.0		372.0	0.0
3	4138	3.0	0.0	4138.0	0.5	0.5	0.0	15.0		362.0	0.0
4	4717	90.0	0.0	4499.3	381.3	381.3	0.0	15.0		0.7	0.0
5	8395	90.0	0.0	4499.3	4059.3	4059.3	0.0	0.0		0.7	0.0

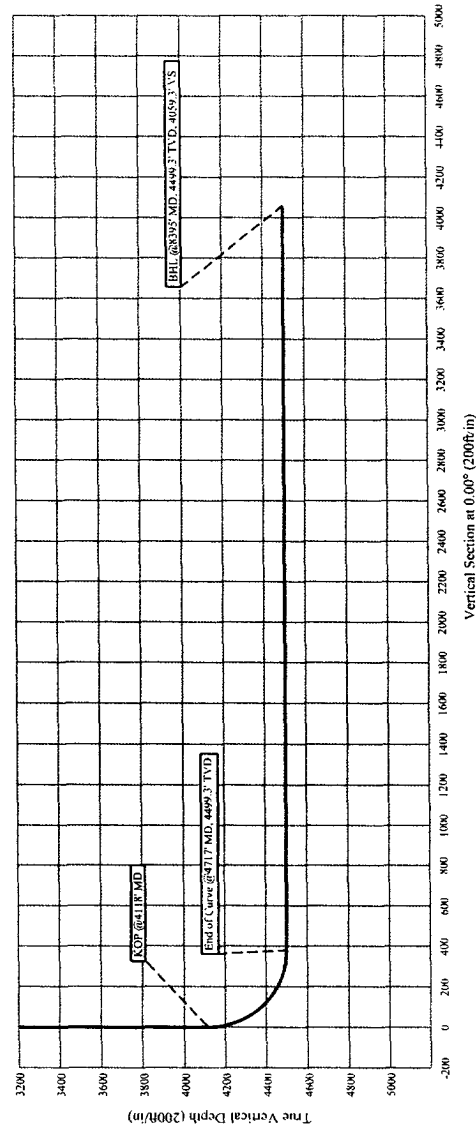
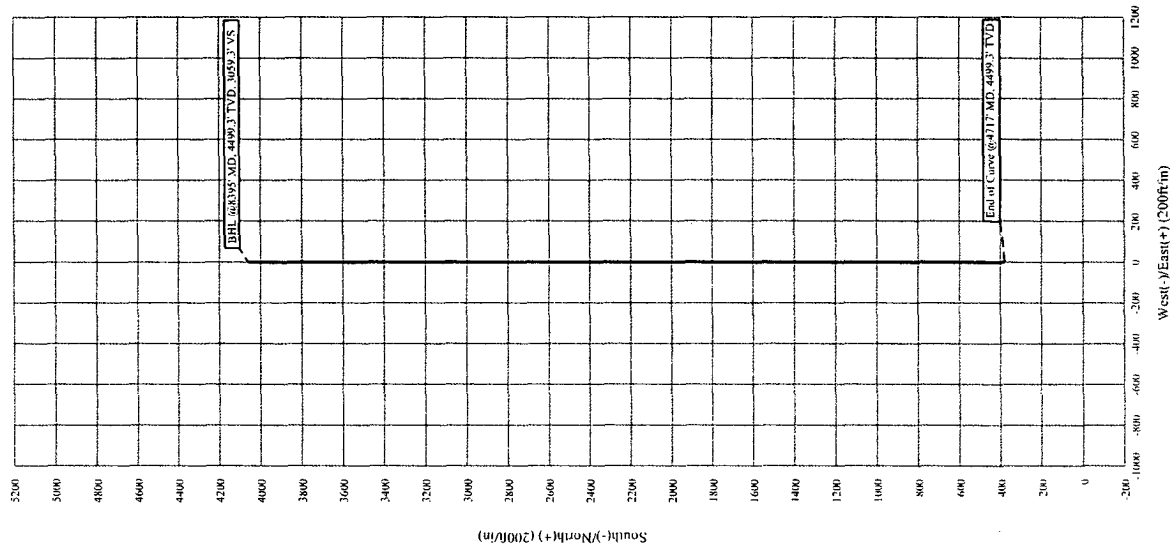
KOP @ 4118' MD  
 BUR = 15 DEG per 100 FT  
 End Curve @ 4717' MD, 4499.3' TVD  
 BHL @ 8395' MD, 4499.3' TVD, 4059.3' VS

# Parallel Petroleum Corp.

Match Box Federal #1  
Section 1, T 19-S, R 21-E  
Eddy County, New Mexico

## COMPANY DETAILS

Parallel Petroleum Corp.  
1004 N. Big Spring, Ste 400  
Midland, Texas 79701





# PARALLEL

Petroleum Corporation

1004 North Big Spring, Suite 400 • Midland, TX 79701 • Ph: 432-684-3727 • Fax: 432-684-3905

November 9, 2005

Mr. Bryan Arrant  
State Of New Mexico,  
Oil Conservation Division  
1301 W. Grand Ave.  
Artesia, New Mexico 88210

Re: Hydrogen Sulfide Potential  
Parallel Petroleum Corporation, Box Area wells,  
T-19-S, R-21-E  
Eddy County, New Mexico

Dear Mr. Arrant;

The Box Top Federal 19 21-1 #1 site which is being drilled seven miles south of Hope, New Mexico was reviewed for its potential for hydrogen sulfide. Mr. John Simitz, Geologist for the Bureau of Land Management, Roswell, New Mexico reviewed the site and stated that no potential for gas was found a Morrow test in this area. Based on this information we believe the potential H<sub>2</sub>S at well locations in this area are negligible.

Should you need additional information regarding this issue, please contact me at the address or phone number listed above or my email address at [ddurham@p111.com](mailto:ddurham@p111.com).

Sincerely,

Deane Durham  
Engineer

## CONDITIONS OF APPROVAL - DRILLING

Operator's Name: PARALLEL PETROLEUM CORPORATION  
Well Name & No. 1 - MATCH BOX FEDERAL  
Location: 560' FSL & 1880' FEL - SEC 1 - T19S - R21E - EDDY COUNTY SHL  
Lease: NM-98791  
Location: 660' FNL & 1880' FEL, Sec. 1, T.19S., R.21E. BHL

### 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) 234-5909 or (505) 361-2822 (After hours) - 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: 13-3/8 inch 9-5/8 inch 7 inch

C. BOP tests

2. No H2S in measurable amounts has been reported in Sec 1 - T19S - R21E.

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 13-3/8 inch surface casing shall be set at 300 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.

2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is circulate cement to the surface. Note: The intermediate hole must be drilled with fresh water or fresh water mud.

3. The minimum required fill of cement behind the 5-1/2 inch production casing is cement shall extend upward a minimum of 500 feet above the uppermost hydrocarbon bearing interval.



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

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 13-3/8 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) required for drilling the surface and intermediate casing shall be 2000 psi. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling below the 9-5/8 inch casing shall be 3000 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.
- BOPE must be tested prior to drilling into the Wolfcamp Formation by an independent service company.

### **IV. DRILLING MUD:**

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp Formation, and shall be used until production casing is run and cemented. Monitoring equipment shall consist of the following:

1. Recording pit level indicator to indicate volume gains and losses.
2. Mud measuring device for accurately determining the mud volumes necessary to fill the hole during trips.
3. Flow-sensor on the flow line to warn of abnormal mud returns from the well.