

OCD-ARTESIA

ATS-07-399
EA-751Form 3160-3
(April 2004)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER


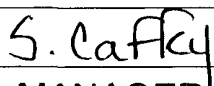
FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007Mon 05/03/2007
JUN 04 2007
OCD-ARTESIA, NM

| | | |
|--|---|--|
| 1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER | | 5. Lease Serial No. NM NM 105853 |
| 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. Record Box 1921-10 Federal #1 |
| 3b. Phone No. (include area code) 432/684-3727 | | 9. API Well No. 30-015-35641 |
| 4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 1780' FNL and 330' FWL At proposed prod. zone 1780' FNL and 660' FEL | | 10. Field and Pool, or Exploratory Four Mile Draw, Wolfcamp, SW |
| 11. Sec., T. R. M. or Blk. and Survey or Area 10-19S-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) 660' | 16. No. of acres in lease 640 | 17. Spacing Unit dedicated to this well 320 |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 4000' | 19. Proposed Depth 5500' | 20. BLM/BIA Bond No. on file NMB000265 |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) GL 4284' | 22. Approximate date work will start* 09/01/2007 | 23. Estimated duration 30 days |

24. Attachments

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

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the authorized officer.

| | | |
|---|--------------------------------------|---------------------|
| 25. Signature  | Name (Printed/Typed) Deane Durham | Date 05/03/2007 |
| Title Drilling Engineer, Parallel Petroleum Corporation | | |
| Approved by (Signature)  | Name (Printed/Typed) S. Caffey | Date MAY 31 2007 |
| Title FIELD MANAGER | | |
| Office CARLSBAD FIELD OFFICE | | |

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

Reswell Controlled Water Basin

APPROVAL FOR TWO YEARS

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 APPROVALAPPROVAL 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.

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 105853

Legal Description of Land: Record Box 1921-10 Federal #1
SHL: 1780' FNL AND 330' FWL, SEC 10, T19S, R21E
Eddy County, New Mexico

Formation(s) (if applicable: Wolfcamp

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

BLM Bond File No: NMB000265

5-3-2007
Date

Deane Durham
Name: Deane Durham
Title: Engineer

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

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

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

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Frances Dr.
Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | |
|---------------|---|---|
| API Number | Pool Code 97553 | Pool Name Four Mile Draw; Wolfcamp, SW |
| Property Code | Property Name RECORD BOX 1921-10 FEDERAL | Well Number 1 |
| OGRID No. | Operator Name PARALLEL PETROLEUM | Elevation 4284' |

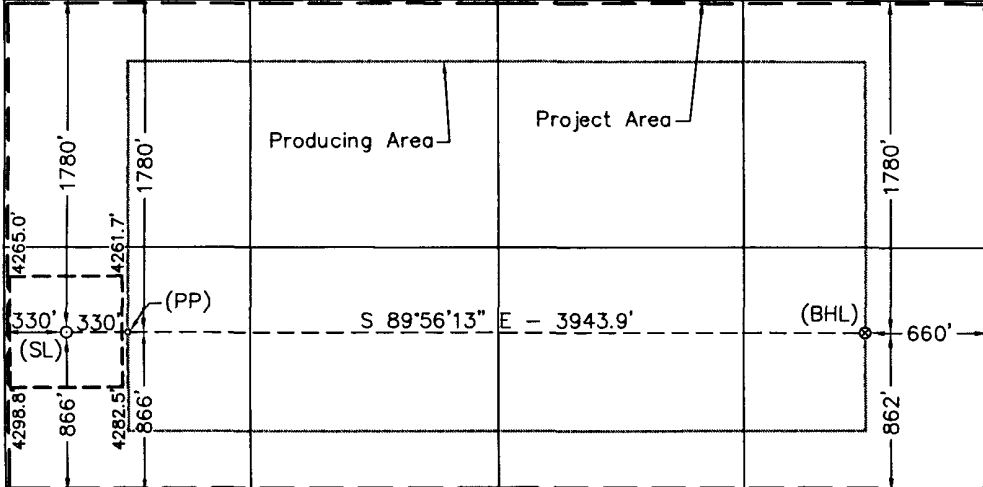
Surface Location

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| E | 10 | 19 S | 21 E | | 1780 | NORTH | 330 | WEST | EDDY |

Bottom Hole Location If Different From Surface

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|------------------------|-----------------|--------------------|-----------|---------|---------------|------------------|---------------|----------------|--------|
| H | 10 | 19 S | 21 E | | 1780 | NORTH | 660 | EAST | EDDY |
| Dedicated Acres 320 | Joint or Infill | Consolidation Code | Order No. | | | | | | |

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

| | | |
|---|---|--|
|  | | <p>OPERATOR CERTIFICATION</p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or undleased 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Deane D. Duhon</i> 5-3-07 Signature Date <i>Deane Duhame</i> Printed Name</p> |
| <p>Surface Location Plane Coordinate X = 359,787.2 Y = 610,377.8 Geodetic Coordinate Lat. 32°40'37.92" N Long. 104°47'20.47" W (NAD '27)</p> | <p>Penetration Point Plane Coordinate X = 360,117.1 Y = 610,377.4 Geodetic Coordinate Lat. 32°40'37.93" N Long. 104°47'16.61" W (NAD '27)</p> | <p>Bottom Hole Location Plane Coordinate X = 364,059.9 Y = 610,373.1 Geodetic Coordinate Lat. 32°40'38.06" N Long. 104°46'30.48" W (NAD '27)</p> |
| <p>NOTE: 1) Plane Coordinates shown hereon are Transverse Mercator Grid and Conform to the "New Mexico Coordinate System", New Mexico East Zone, North American Datum of 1927. Distances shown hereon are mean horizontal surface values.</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 supervision and that the same is true and correct to the best of my belief.</p> <p>April 26, 2007 Date of Survey Signature & Seal of Professional Surveyor: <i>[Signature]</i> W.O. Num. 2007-0348-1 Certificate No. MACON, McDONALD 12185</p> |

**ATTACHMENT TO FORM 3160-3
RECORD BOX 1921-10 FEDERAL #1
Surface Hole Location
1780 FNL AND 330 FWL, SEC 10, 19S, 21E
Bottom Hole Location
1780 FNL AND 660 FEL, SEC 10, 19S, 21E
EDDY COUNTY, NEW MEXICO**

DRILLING PROGRAM

This well is designed as a horizontal test in the Wolfcamp formation.

1. GEOLOGIC NAME OF SURFACE FORMATION

San Andres

2. ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS

Glorieta 1650'(+2634')
Tubb 2660'(+1624')
Abo Shale 3300' (+984')
Abo Carbonate 3420' (+864')
Wolfcamp 4225' (+59')
Wolfcamp Shale 4415'(-131')

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

Fresh water 790'
Oil and Gas Wolfcamp 4225' (+59')
No H₂S gas should be encountered

RECORD BOX 1921-10 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> |
|--------------------|-----------------------|---------------|--------------|--------------|
| 16" conductor | 0' - 120' | | | |
| 8 5/8" | 0' - 1500' | 24# | J-55 | STC |
| 5 1/2" | 0' - HZ TD | 17# | N-80 | LTC |

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

Drilling Procedure

- a. Set 16" conductor pipe as deep as possible up to 120' with a rathole unit.
- b. Drill 11" surface hole to an approximate depth of 1500', using fresh water and viscous sweeps for hole cleaning. Set 8 5/8", 24# J-55 casing with 460 sx, Class C cement (lead will be 50/50 Poz, circulate to surface, 1" if necessary).
- c. Set slips on 8 5/8. Cut 8 5/8 and NU WH & BOP.
- d. Drill 7 7/8" production hole to KOP at approximately 3833', using cut brine to an approximate depth of 3200' and a polymer mud system to TD.
- e. Pick up directional tools and kick-off at 90 degree grid azimuth.
- f. Build angle in 7 7/8" hole at 14.6 degrees per 100' to 90 degrees and hold.
- a. Drill 7-7/8" horizontal drain hole to a terminus of 660' FEL.
- b. Run 5 1/2" 17# N-80 Casing from TD back to surface, cement with acid soluble cement per completion *Lead 550 sx "C" / Tail 450 sx Fresh C*
yld 2.45 Intertail yld 2.61
- c. Rig Down Rotary Tools

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 1500' with 8.3 ppg fresh water system and viscous sweeps for hole cleaning.
- b. The production section from 1,500' to 3,200' will utilize a cut brine mud system from 8.8 to 9.2 ppg.
- c. The remaining production section from 3,200' to TD will be a polymer mud system with mud weight (8.8 – 9.6 ppg) sufficient to control formation pressure anticipated to be approximately 1,900 psi.

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT

None required.

8. LOGGING, TESTING, AND CORING PROGRAM

Mud logs are planned. DLL/CNL/LDT/CAL/GR logging, drill stem tests, cores and sidewall cores are possible.

9. ABNORMAL CONDITIONS, PRESSURES, TEMPERATURES & POTENTIAL HAZARDS

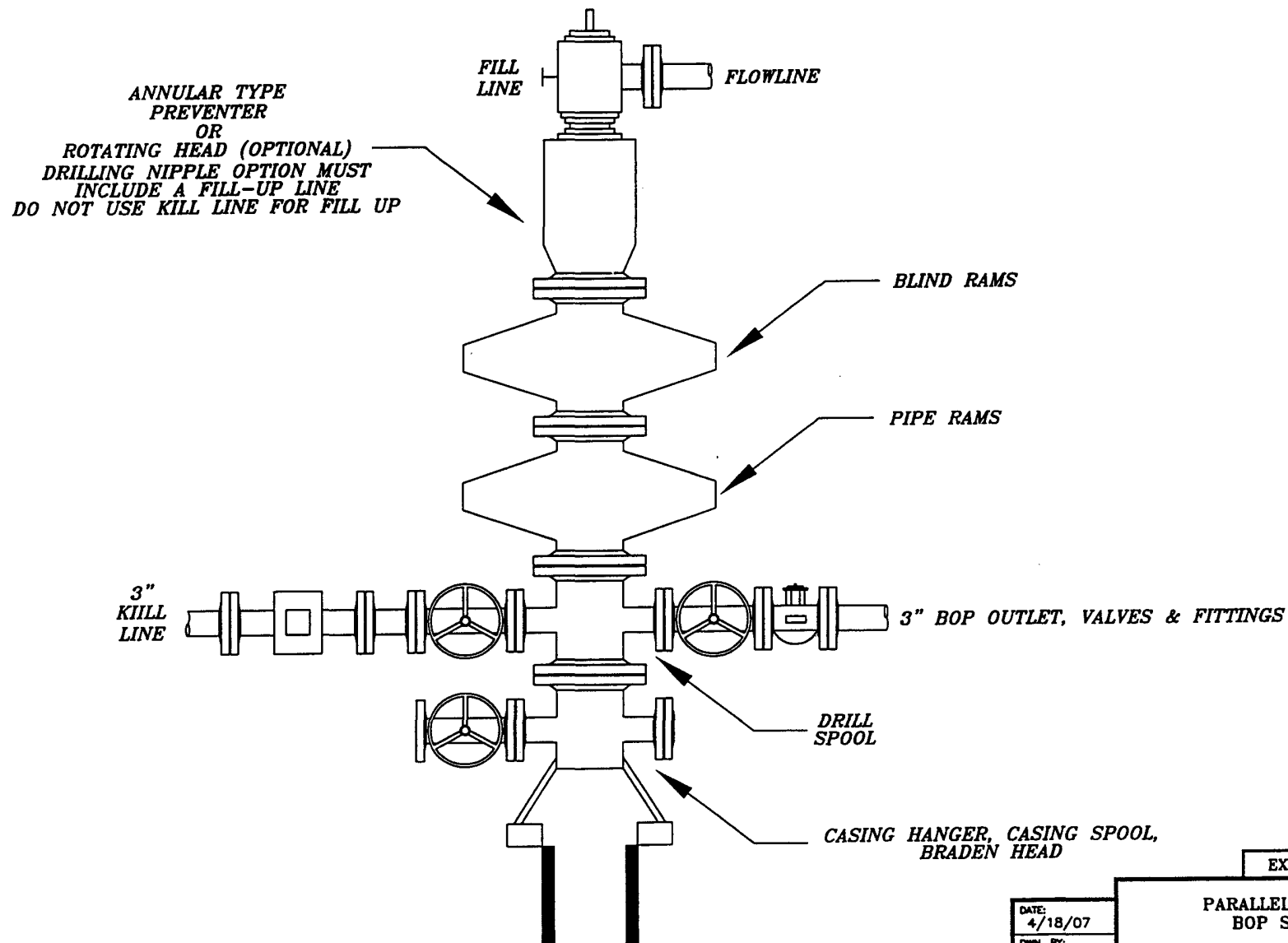
None anticipated.

BHP expected to be 1,900 psi.

10. ANTICIPATED STARTING DATE:

It is planned that operations will commence around third quarter of 2007 with drilling and completion operation lasting about 30 days.

MINIMUM BOP SCHEMATIC 3M SERVICE MINIMUM



NOT TO SCALE

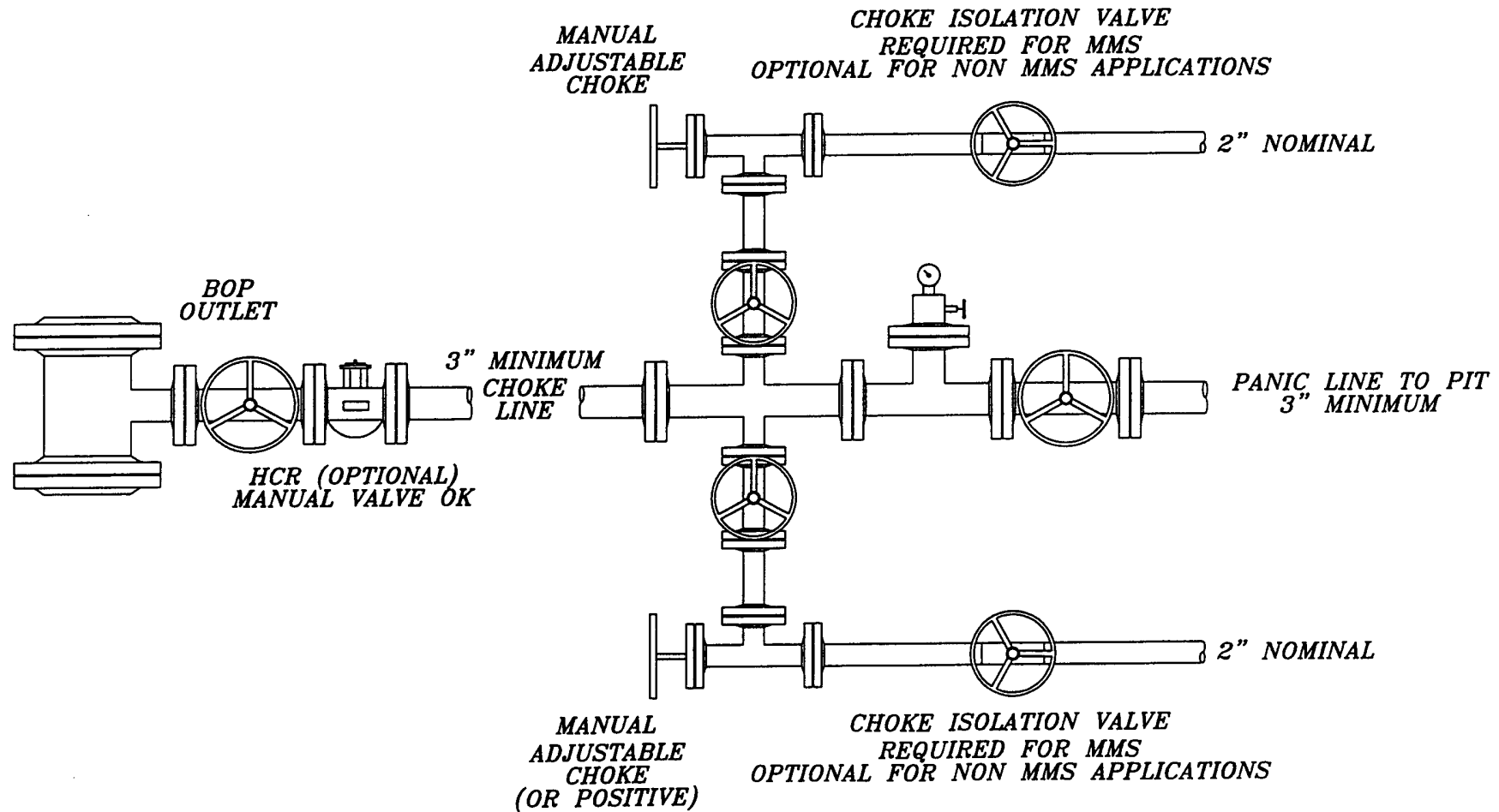
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| DATE: | 4/18/07 |
| DWN. BY: | RC |
| FILE: | C:\P\HALL\12429\BOP SCHEMATIC |

EXHIBIT I

PARALLEL PETROLEUM
BOP SCHEMATIC

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

CHOKE MANIFOLD **3M SERVICE MINIMUM**



NOT TO SCALE

DATE:
4/18/07
DWN. BY:
RC
FILE:
C:\P\PARALLEL\2429\CHOKE MANIFOLD

EXHIBIT J

PARALLEL PETROLEUM
CHOKE MANIFOLD

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

*Complete Plan
in CPM copy*



PARALLEL
Petroleum Corporation

1004 North Big Spring, Suite 400 • Midland, TX 79701 • Ph: 432-684-3727 • Fax: 432-685-6580

June 12, 2006

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

Re: Hydrogen Sulfide Potential
South Hope Area Wolfcamp Program
SW Chaves and Eddy Counties, New Mexico

Dear Mr. Arrant:

Parallel Petroleum Corporation operates the Boxtop 1921-1 Federal #1 well located in Section 1, T-19-S, R-21-E. The well which was tested in the Wolfcamp formation did not have any indications of hydrogen sulfide from this formation. We believe the potential for it on locations in this area are negligible. There are no occupied dwellings in the area of these new drilling locations.

Should you need any additional information regarding this issue, please contact me at the address or phone number listed or email at ddurham@ppll.com.

Sincerely,

A. Deane Durham
Senior Engineer

PARALLEL SURVEY CALCULATION PROGRAM PETROLEUM CORPORATION

| | | | |
|----------------|--------------------------------|-------------------|---------------------------------------|
| OPERATOR: | Parallel Petroleum Corporation | Supervisors: | |
| WELL: | Record Box 1921-10 Federal #1 | | |
| LOCATION: | S/2 N/2 Sec. 10 T-19-S R-21-E | | |
| API NUMBER: | | | |
| COMMENTS: | | | |
| | | MAG DEC. (-/+) | |
| | | GRID CORR. (-/+) | |
| | | TOTAL CORR. (-/+) | 0.0 |
| DATE: 04/09/07 | | TIME: 10:19 AM | TRUE TO GRID <input type="checkbox"/> |

| MINIMUM CURVATURE CALCULATIONS(SPE-3362) | | | | | | | | | PROPOSED DIRECTION 90.0 | | TARGET TRACKING TO CENTER | |
|--|------|------|------|--------|--------|-----|--------|------|-------------------------|--|---------------------------|----------|
| SVY | MD | INC | GRID | TVD | VERT | N-S | E-W | DLS/ | | | ABOVE(+) | RIGHT(+) |
| NUM | | | AZM | | SECT | | | 100 | | | BELOW(-) | LEFT(-) |
| TIE | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | | |
| 1 | 3833 | 0.0 | 0.0 | 3833.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | 392.0 | 0.0 |
| 2 | 3843 | 1.5 | 90.0 | 3843.0 | 0.1 | 0.0 | 0.1 | 14.6 | | | 382.0 | 0.0 |
| 3 | 3853 | 2.9 | 90.0 | 3853.0 | 0.5 | 0.0 | 0.5 | 14.6 | | | 372.0 | 0.0 |
| 4 | 4449 | 90.0 | 90.0 | 4225.0 | 392.0 | 0.0 | 392.0 | 14.6 | | | 0.0 | 0.0 |
| 5 | 8338 | 90.0 | 90.0 | 4225.0 | 4281.0 | 0.0 | 4281.0 | 0.0 | | | 0.0 | 0.0 |

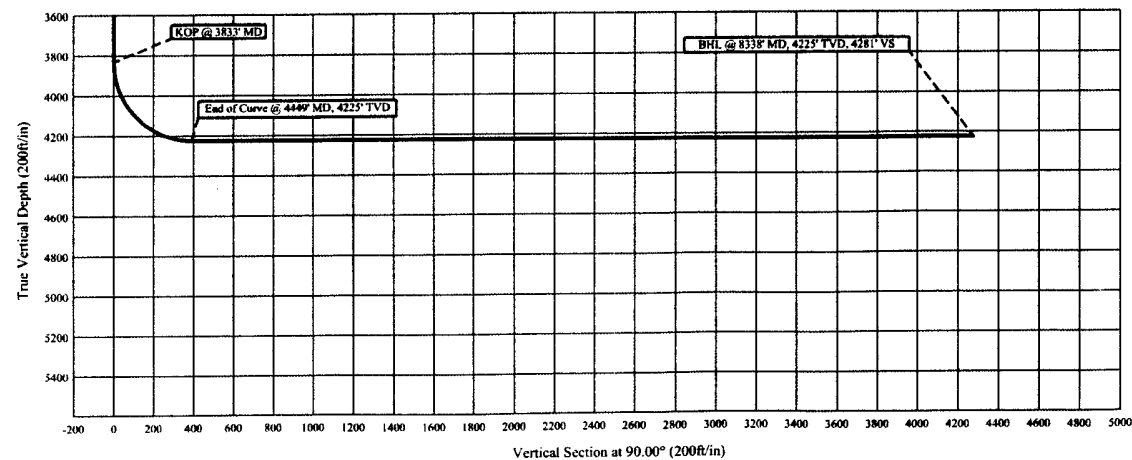
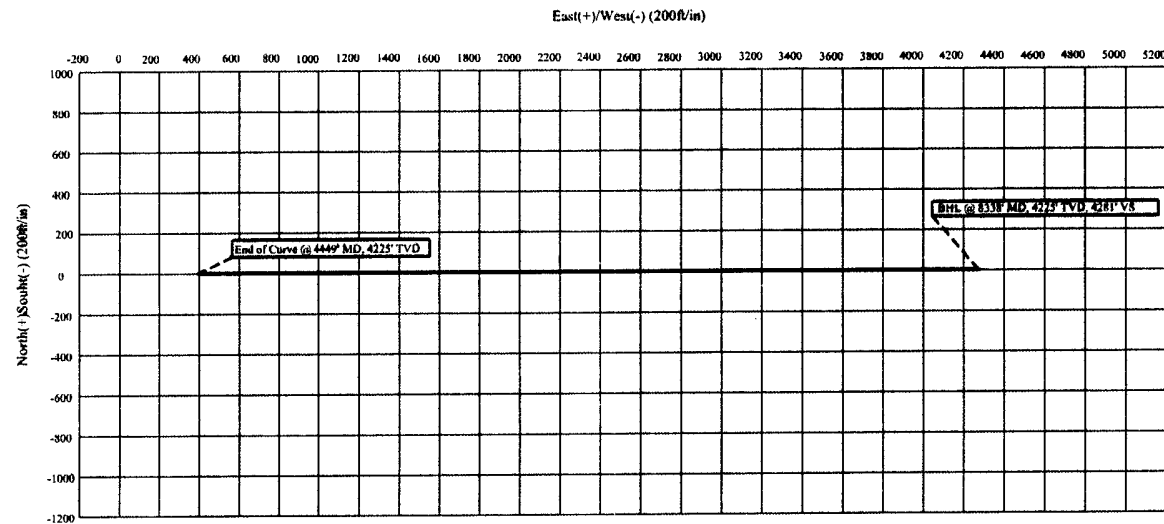
KOP @ 3833' MD
 BUR = 14.6 DEG per 100 FT
 End Curve @ 4449' MD, 4225' TVD
 BHL @ 8338' MD, 4225' TVD, 4281' VS

Parallel Petroleum Corp.

COMPANY DETAILS

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

Record Box 1921-10 Federal #1
S/2N/2 Sec. 10, T-19-S, R-21-E
Eddy County, New Mexico



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

**PARALLEL PETROLEUM CORPORATION
RECORD BOX 1921-10 FEDERAL #1
SHL: 1780' FNL AND 330' FWL, SEC 10, T19S, R21E
EDDY COUNTY, NEW MEXICO**

LOCATED:

9 miles South of Hope, New Mexico

OIL & GAS LEASE:

NM NM 105853

RECORD LESSEE:

Echo Production Inc.
P.O. Box 1210
Graham, Texas 76450

BOND COVERAGE:

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

ACRES IN LEASE:

640

SURFACE OWNER:

Federal

SURFACE TENANT:

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

POOL:

Primary Objective - Wolfcamp

RECORD BOX 1921-10 FEDERAL #1

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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
- F-1. Topographic Map showing route of water lines.
- 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 F. The access road will come off County Road 20 and go west on an existing lease road that is access to the Parallel Petroleum Duke Federal #1. If any access road is needed it will be less than 50' in length and 16' wide.

B. **Surface Material**

Caliche from a commercial source.

C. **Maximum Grade**

The surface location has a 22' slope from the southwest corner to the northwest corner (450') or less than 5%. The cut and fill for this site should be less than 11'.

D. **Turnouts**

No turnouts will be required.

RECORD BOX 1921-10 FEDERAL #1

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E. Drainage Design

No low water crossings will be constructed on this section of the access road.

F. Culverts

It is not anticipated that any culverts will be needed on the access road at this time.

G. Gates and Cattle Guards

No gates or cattle guards will be installed as no fences will be crossed for this location or access road.

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

A water well may be drilled on this location for water supply for both drilling and completion. Upon completion of operations on this site the well may be used for drilling of additional wells on this lease. The well will be made available for the surface tenant upon completion of drilling in this area for use as stock water. A permit will be secured from the New Mexico Office of the State Engineer for this water well. Or water will be secured and trucked or transported by poly line to the location from a commercial source.

A 4" poly water line will be utilized for water used for drilling the well. The water needed for the completion phase of the operation for the purpose of well stimulation will be transported to the well by means of a temporary 12" aluminum pipeline. The water will be pumped from a fresh water pit located at the Box Top Federal #1 well site with is located 760' FWL AND 860' FSL, SEC 1, T19S-R21E. The route for the flowline is shown on Exhibit F-1 and will run in the ROW of existing County and lease access roads.

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.

RECORD BOX 1921-10 FEDERAL #1

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- 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. A Reserve Pit will be utilized for the drilling of this well. A secondary berm will be constructed on the down slope side of the location capture any leaks or spills from the reserve pit before they reach the nearby creek bed. The reserve pit will be closed as per BLM and NMOCD regulations and guidelines. For closure of the pit the cuttings will be placed in a lined trench along side the drilling pit for disposal. If this disposal method is used the cuttings will be covered with a plastic liner and then covered with a minimum of 3' of backfill. The pit area will then be re-contoured.

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 that will not be used lease for operations will be removed from the site.
- B. After abandonment, all equipment, trash, and debris will be removed and the site will be reclaimed as per BLM permit stipulations.

10. OTHER INFORMATION

A. Topography

The project is located on open, rolling ridge slopes, with northeast exposure. The regional drainage of the site being to the north and east toward Catclaw Draw. The surface location has a 22' slope from the southwest corner to the northwest corner. The cut and fill for this site should be less than 11'.

RECORD BOX 1921-10 FEDERAL #1

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B. Soil

Soils are very thin and shallow, tan/pink/grey loamy sandy silts, overlying limestone bedrock.

C. Flora and Fauna

The location is located on a ridge and the vegetation consist of broom snakeweed, grasses, creosote, cholla, yucca catclaw, prickly pear, beargrass and various species of cacti.

D. Ponds and Streams

Catclaw Draw, an intermittent stream which flows west to east, and is located 600' north of this location. There are no other rivers, lakes, ponds, or streams in the area.

E. Residences and Other Structures

The Barbra Runyon Ranch house is located 2.5 miles northeast of the proposed well site

F. Archaeological, Historical, and Cultural Sites

The archaeological report will be submitted by:

Southern New Mexico Archaeological Services, Inc.,
P.O. Box 1
Bent, New Mexico 88314 Phone 505-671-4797

G. Land Use

Grazing

H. Surface Ownership

Federal

11. OPERATOR'S REPRESENTATIVE

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

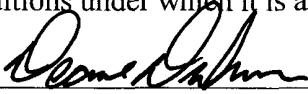
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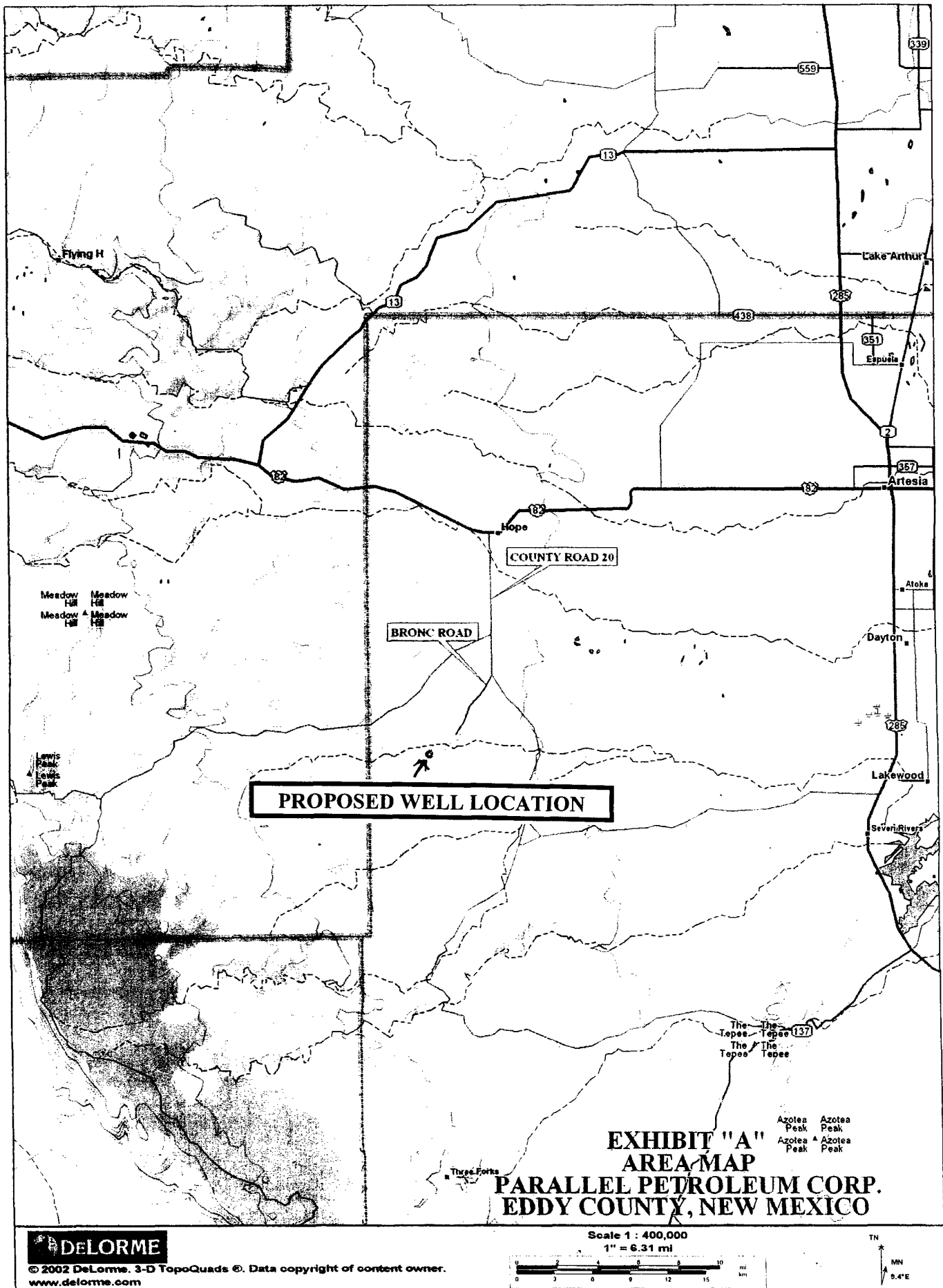
Page 6

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.

5-3-2007
Date


Name: Deane Durham
Title: Engineer

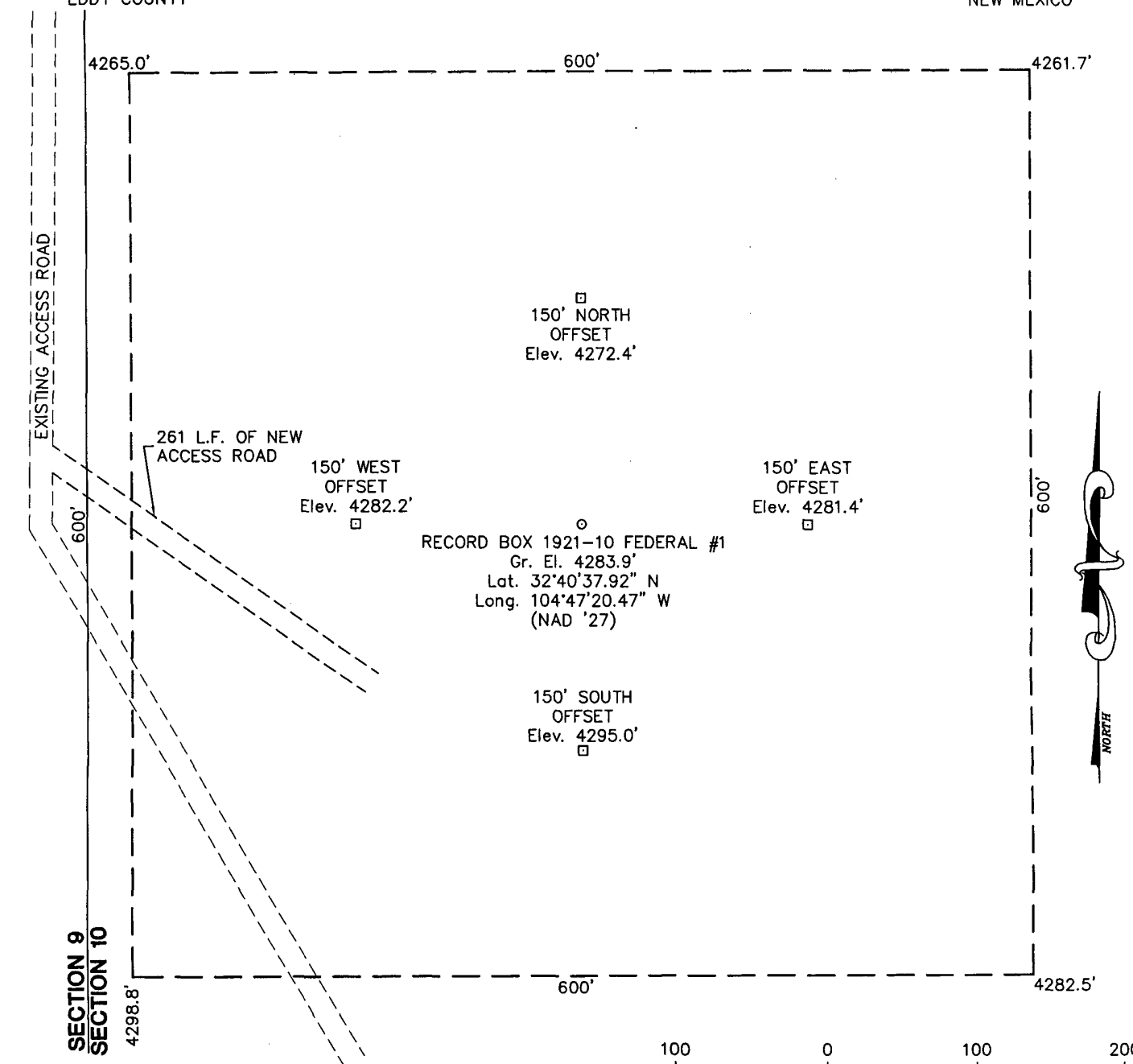


SECTION 10, TOWNSHIP 19 SOUTH, RANGE 21 EAST, N.M.P.M.

EDDY COUNTY

NEW MEXICO

L-2007-0348-B



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 (6.9 TOTAL) TO A FORK IN THE ROAD, THE INTERSECTION OF SAID COUNTY ROAD 12 AND A LEASE ROAD HEADING SOUTHWEST (RIGHT FORK), THEN GO SOUTHWEST ALONG SAID LEASE ROAD 3.5 MILES TO ANOTHER LEASE ROAD ON WEST (RIGHT) SIDE OF ROAD, THEN GO WEST ALONG SAID LEASE ROAD 1.2 MILES TO A POINT WHERE AN ACCESS ROAD BEGINS TO THE NORTH (RIGHT) SIDE OF SAID LEASE ROAD, THEN GO NORTH ALONG SAID ACCESS ROAD 0.6 MILES TO A NEW ACCESS ROAD ON EAST (RIGHT SIDE OF SAID ACCESS ROAD, THEN GO EAST APPROXIMATELY 261 FEET TO THE PROPOSED LOCATION.



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

PARALLEL PETROLEUM CORPORATION

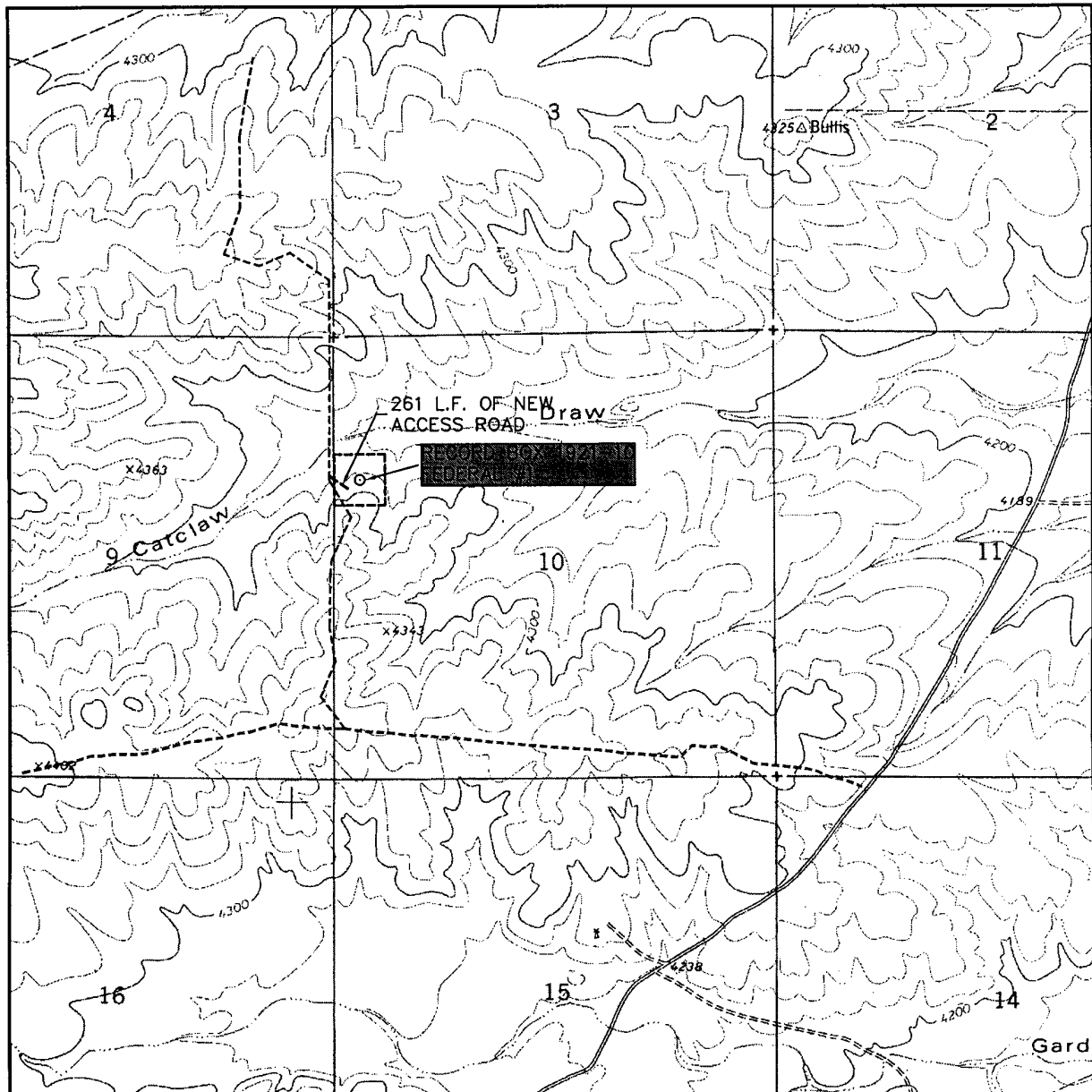
RECORD BOX 1921-10 FEDERAL #1

Located 1780' FNL & 330' FWL, Section 10
Township 19 South, Range 21 East, N.M.P.M.
Eddy County, New Mexico

| | |
|--------------------------|--------------------------------------|
| Drawn By: LVA | Date: March 22, 2007 |
| Scale: 1"=100' | Field Book: 354 / 46-54, 352 / 78-79 |
| Revision Date: 5-01-2007 | Quadrangle: Holt Tank |
| W.O. No: 2007-0348-1 | Dwg. No.: L-2007-0348-B |

EXHIBIT C

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
HOLT TANK - 20'

SEC. 10 TWP. 19-S RGE. 21-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1780' FNL & 330' FWL

ELEVATION 4284'

OPERATOR PARALLEL PETROLEUM CORPORATION

LEASE RECORD BOX 1921-10 FEDERAL

U.S.G.S. TOPOGRAPHIC MAP

HOLT TANK



EXHIBIT F

110 W. LOUISIANA, STE. 110
MIDLAND TEXAS, 79701

(432) 687-0865 - (432) 687-0868 FAX

CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Parallel Petroleum Corporation
Well Name & No. 1-Record Box 1921-10 Federal
Location SHL: 1780 FNL, 0330 FWL, Sec 10, T-19-S, R-21-E, Eddy County, NM
Location BHL: 1780 FNL, 0660 FEL, Sec 10, T-19-S, R-21-E, Eddy County, NM
Lease: NMNM-105853

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I. DRILLING OPERATIONS REQUIREMENTS:

- A. The Bureau of Land Management (BLM) is to be notified a minimum of 4 hours in advance for a representative to witness:
1. Spudding well
 2. Setting and/or Cementing of all casing strings
 3. BOPE tests
- Eddy County call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822
- B. Although there is no measured Hydrogen Sulfide in this section, minor amounts have been measured in section 7 at less than 10 ppm in STVs.
- C. 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.

II. CASING: If equivalent or adequate grades and weights of casing are substituted, they must meet API specs.

- A. The 8-5/8 inch surface casing shall be set at 1500 feet and cemented to the surface.
1. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
 2. Wait on cement (WOC) time for a primary cement job will be a minimum of 12 hours for a non-water basin, 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compression strength, whichever is greater. (This is to include the lead cement)
 3. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compression strength, whichever is greater.
 4. If cement falls back, remedial action will be done prior to drilling out that string.

Possible lost circulation in the San Andres, Glorieta, and Wolfcamp formations.
Possible high pressure gas kicks in the Wolfcamp formations.

- B. The minimum required fill of cement behind the 5-1/2 inch production casing is cement is to extend a minimum of 200 feet inside of the surface casing.

- C. If hardband drill pipe is rotated inside casing; returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

III. PRESSURE CONTROL:

- A. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53.
- B. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M) PSI**.
- C. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
1. The tests shall be done by an independent service company.
 2. The results of the test shall be reported to the appropriate BLM office.
 3. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
 4. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi in accordance with API RP 53. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.
 5. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

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.

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

V. DRILL STEM TESTS

If drill stem tests are performed, Onshore Order 2.III.D requirements are in effect.

Engineer on call phone: 505-706-2779

WWI 050807