AT5-07-360

Form 3160-3
(April 2004)

OCD-ARTESIA

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

Month - Year
MAY 2007
OCD - ARTESIA, NM

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☑ DRILL ☐ REENTER	5. Lease Serial No. NM NM 103570
	6. If Indian, Allotee or Tribe Name
	7. If Unit or CA Agreement, Name and No.
1b. Type of Well: ☐ Oil Well ☑ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone	8. Lease Name and Well No. 30486 Black Box 1921-23 Federal #1
2. Name of Operator Parallel Petroleum Corporation 230387	9. API Well No. 30-015-35595
3a. Address 1004 North Big Spring, Suite 400 Midland, Texas	3b. Phone No. (include area code) 432/684-3727
	10. Field and Pool, or Exploratory Four Mile Draw; Wolfcamp, SW
4. Location of Well (Report location clearly and in accordance with any State requirements.*) At surface SHL 760' FSL AND 300' FEL, Section 23 At proposed prod. zone BHL 760' FSL and 660' FWL, Section 23	11. Sec., T. R. M. or Blk. and Survey or Area 23, T19S, R21E
14. Distance in miles and direction from nearest town or post office* 9 miles south of Hope, New Mexico	12. County or Parish Eddy / 13. State NM

Roswell Controlled Water Basin

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 760'	16. No. of acres in lease 2,560.00	17. Spacing Unit dedicated to this well 320
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 2500'	19. Proposed Depth 5000'	20. BLM/BIA Bond No. on file NMB000265
21. Elevations (Show whether DF, KDB, RT, GL, etc.) GL 4260'	22. Approximate date work will start* 04/15/2007	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:

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

25. Signature Deane Durham	Name (Printed/Typed) Deane Durham	Date 3-8-07

Title: Engineer, Parallel Petroleum Corporation

Approved by (Signature) /s/ Don Peterson	Name (Printed/Typed) /s/ Don Peterson	Date MAY 02 2007
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)

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

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

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 & Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Frances Dr
Santa Fe, NM 87505

Month - Year
MAY 2007
OCD - ARTESIA, NM

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	Pool Name
	97553	Four Mile Draw;Wolfcamp, SW

Property Code	Property Name	Well Number
	BLACK BOX 1921-23 FEDERAL	1

OGRID No.	Operator Name	Elevation
	PARALLEL PETROLEUM CORPORATION	4260'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	23	19 S	21 E		760	SOUTH	300	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
M	23	19 S	21 E		760	SOUTH	660	WEST	EDDY

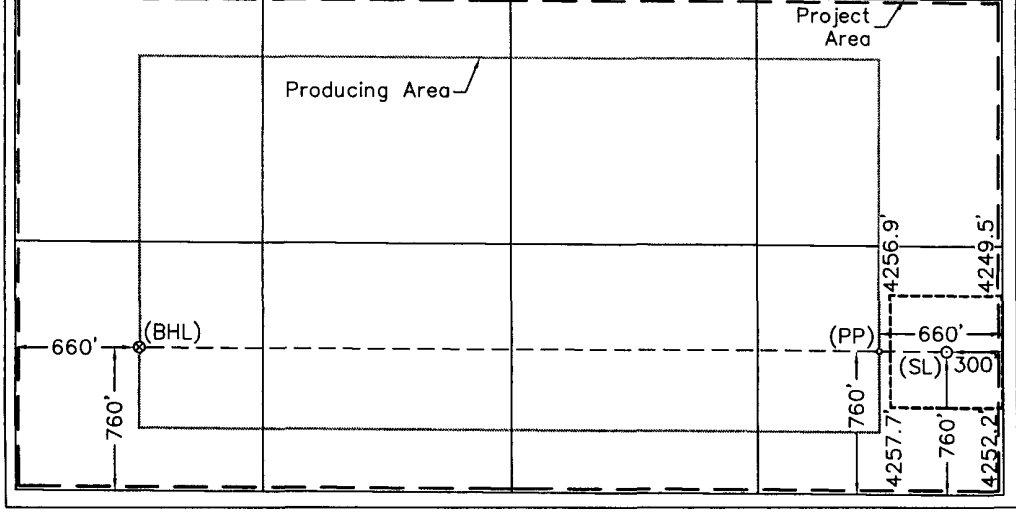
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			

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

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.

Coordinate Table	
Description	Plane Coordinate
Black Box 1921-23 Federal #1 Surface Location	X = 369,688.4 Y = 597,038.5
Black Box 1921-23 Federal #1 Penetration Point	X = 369,328.4 Y = 597,040.6
Black Box 1921-23 Federal #1 Bottom Hole Location	X = 365,358.3 Y = 597,063.0



OPERATOR CERTIFICATION

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 unleased mineral interestin 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.

Signature Date

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

October 26, 2006
Date of Survey

Signature & Seal of Professional Surveyor

W.O. Num. 2006-1062

Certificate No. MACON McDONALD 12185

ATTACHMENT TO FORM 3160-3
BLACK BOX 1921-23 FEDERAL #1
Surface Hole Location
760 FSL AND 300 FEL, SEC 23, 19S, 21E
Bottom Hole Location
760 FSL AND 660 FWL, SEC 23, 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 1739'(+2521')
Tubb 2745'(+1515')
Yeso 2885' (+1375')
Abo Shale 3385' (+875')
Abo Carbonate 3499' (+1207')
Wolfcamp 4330' (+761')
Wolfcamp Shale 4430'(-170')

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

Fresh water 790'
Oil and Gas Wolfcamp 4330' (+761')
No H_2S gas should be encountered

4. CASING AND CEMENTING PROGRAM

Casing Size	From To	Weight	Grade	Joint
16" conductor	0'-120'			
8 5/8"	0' – 1500'	24#	J-55	STC
5 1/2"	0' – TOTAL DEPTH	17#	N-80	LTC

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

8-5/8" slurry: Lead: 225 sacks (50:50) Poz (Fly Ash): Class C + 5% bwow Sodium Chloride + 10% bwoc Bentonite + 151.7% fresh water. Tail: 235 sacks Class C + 1% bwoc Calcium Chloride + 56.3% fresh water

Note: If cement does not circulate to surface, notify BLM. A temperature survey will be required. Top out to surface with 1" pipe in the annulus.

Note: 5-1/2" Acid-soluble cement per completion procedure.

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" CSG. Cut 8 5/8" CSG and NU & test BOP.
d. Drill 7 7/8" production hole to approximately 4,600', using cut brine to an approximate depth of 3,300' and a polymer mud system to TD.
e. Run open-hole logs
f. Set CMT kick-off plug.
g. Dress CMT to kick off point at approximately 3,948'.
h. Build angle at 15 degrees per 100' to 90 degrees and hold.
i. Drill 7 7/8" horizontal drain hole to a terminus of 660' FWL approximately 8,466'.
j. Run 5 ½" 17# N-80 CSG to TD. Cement with 750 sx Class C Acid Soluble
k. Circulate to surface or run temperature survey to verify tie in to surface casing.
l. 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 1,500' with 8.3 ppg Fresh Water system and viscous sweeps for hole cleaning.
c. The production section from 1,500' to 3,300' will utilize a cut brine mud system from 8.8 to 9.2 ppg.
d. The remaining production section from 3,300' to TD will be a polymer mud system with mud weight (8.8 – 9.6) 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 as well as CNL/LDT/CAL/GR logging is planned. Additional open-hole logs, drill stem tests, cores and sidewall cores are possible.

9. ABNORMAL CONDITIONS, PRESSURES, TEMPERATURES & POTENTIAL HAZARDS

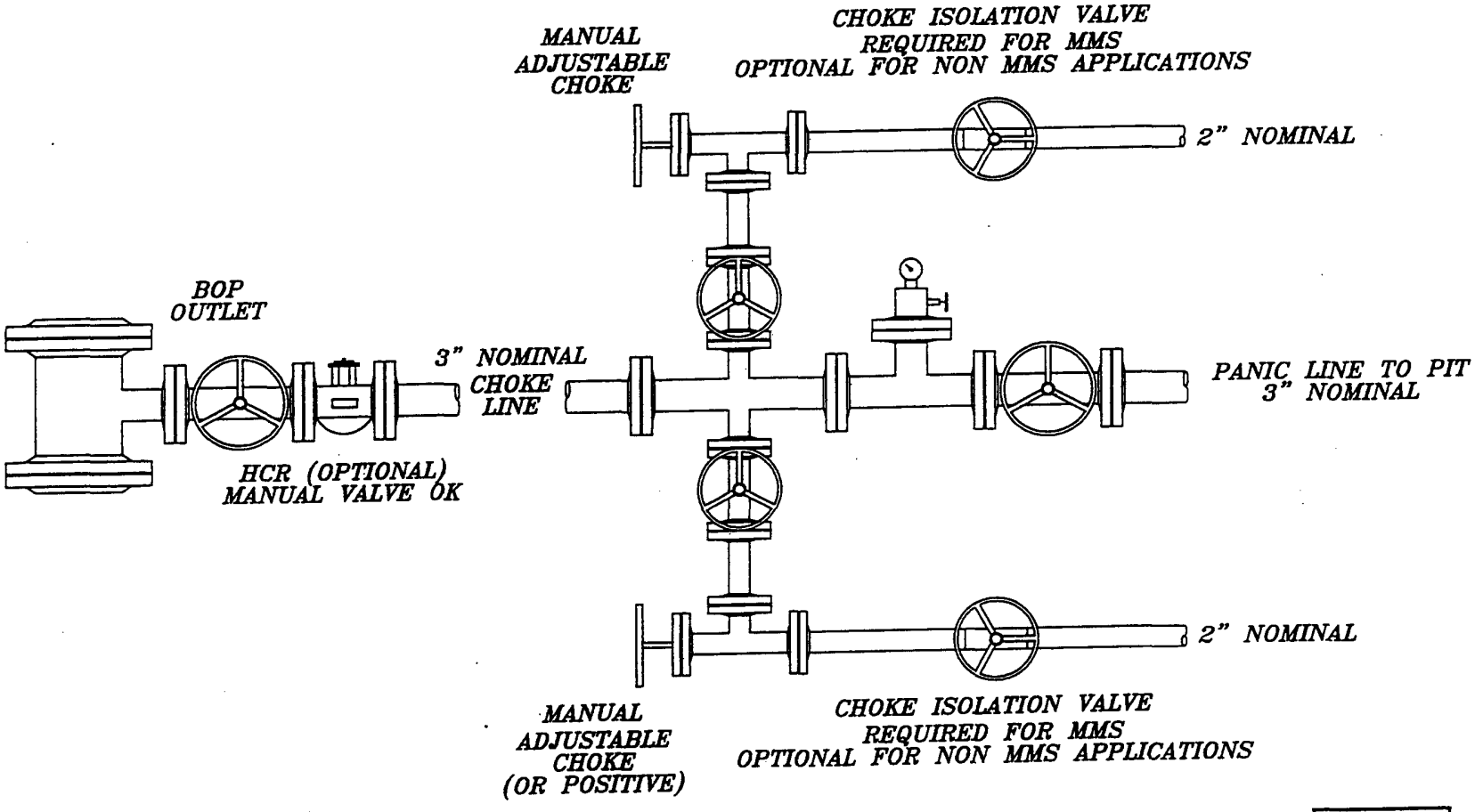
None anticipated.

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 35 days.

CHOKE MANIFOLD
5M SERVICE

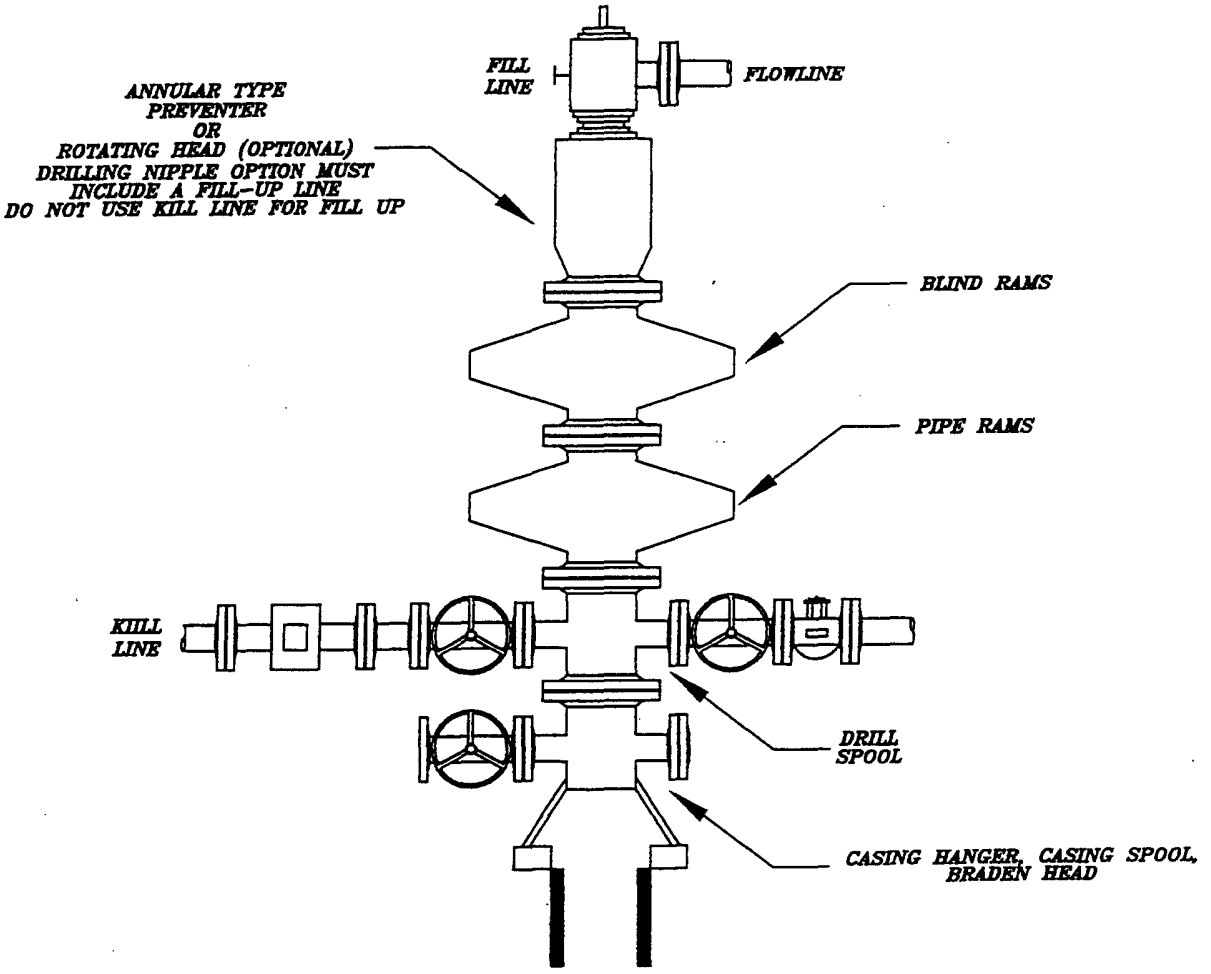


NOT TO SCALE

EXHIBIT J

DATE: 8/17/05	PARALLEL PETROLEUM CHOKE MANIFOLD
DWN. BY: JJ	HIGHLANDER ENVIRONMENTAL CORP. MIDLAND, TEXAS
FILE: C:\PARALLEL\2436\ CHOKE MANIFOLD	

MINIMUM BOP SCHEMATIC



NOT TO SCALE

EXHIBIT I

DATE: 7/26/05	PARALLEL PETROLEUM BOP SCHEMATIC
DWN. BY: JJ	HIGHLANDER ENVIRONMENTAL CORP. MIDLAND, TEXAS
FILE: C:\PHOTOLIB\JOBS\ BOP SCHEMATIC	

PARALLEL PETROLEUM CORPORATION

SURVEY CALCULATION PROGRAM

OPERATOR:	Parallel Petroleum Corporation	Supervisors:	
WELL:	Black Box 1921-23 Federal #1		
LOCATION:	S/2 Sec. 23 T-19-S R-21-E		
API NUMBER:			
COMMENTS:			
		MAG DEC.(-/+)	
		GRID CORR.(-/+)	
		TOTAL CORR.(-/+)	0.0

DATE: 02/12/07 TIME: 2:33 PM TRUE TO GRID

MINIMUM CURVATURE CALCULATIONS(SPE-3362) PROPOSED DIRECTION 270.0

SVY NUM	MD	INC	GRID AZM	TVD	VERT SECT	N-S	E-W	DLS/ 100	TARGET TRACKING TO CENTER ABOVE(+) BELOW(-)	TARGET TRACKING TO CENTER RIGHT(+) LEFT(-)
TIE	0	0.0	0.0	0.0	0.0	0.0	0.0			
1	3948	0.0	0.0	3948.0	0.0	0.0	0.0	0.0	382.0	0.0
2	3958	1.5	270.0	3958.0	0.1	0.0	-0.1	15.0	372.0	0.0
3	3968	3.0	270.0	3968.0	0.5	0.0	-0.5	15.0	362.0	0.0
4	4548	90.0	270.0	4330.0	382.0	0.0	-382.0	15.0	0.0	0.0
5	8466	90.0	270.0	4330.0	4300.0	0.0	-4300.0	0.0	0.0	0.0

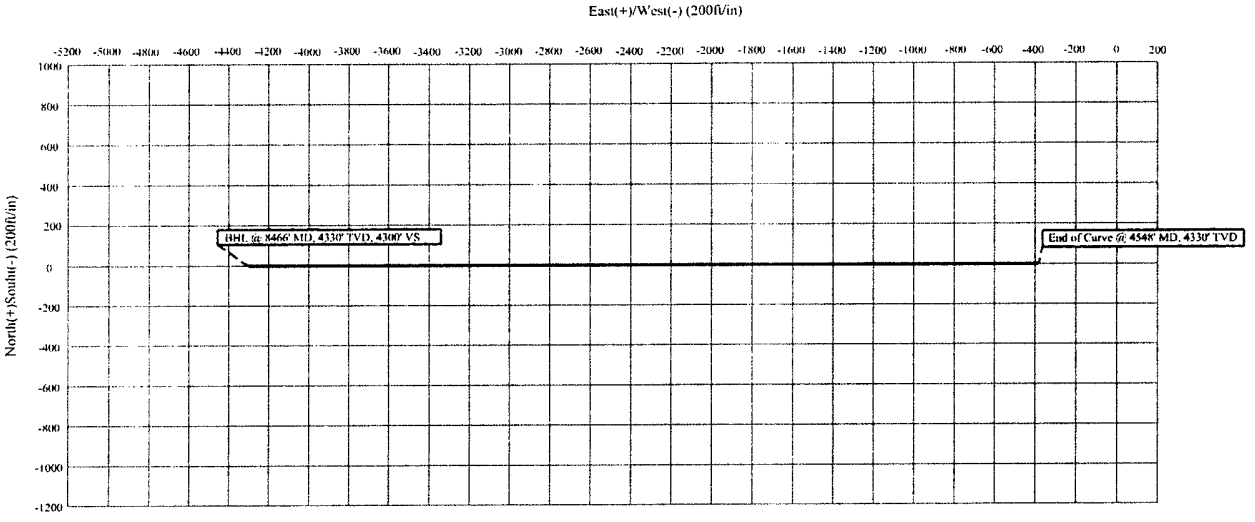
KOP @ 3948' MD
BUR = 15 DEG per 100 FT
End Curve @ 4548' MD, 4330' TVD
BHL @ 8466' MD, 4330' TVD, 4300' VS

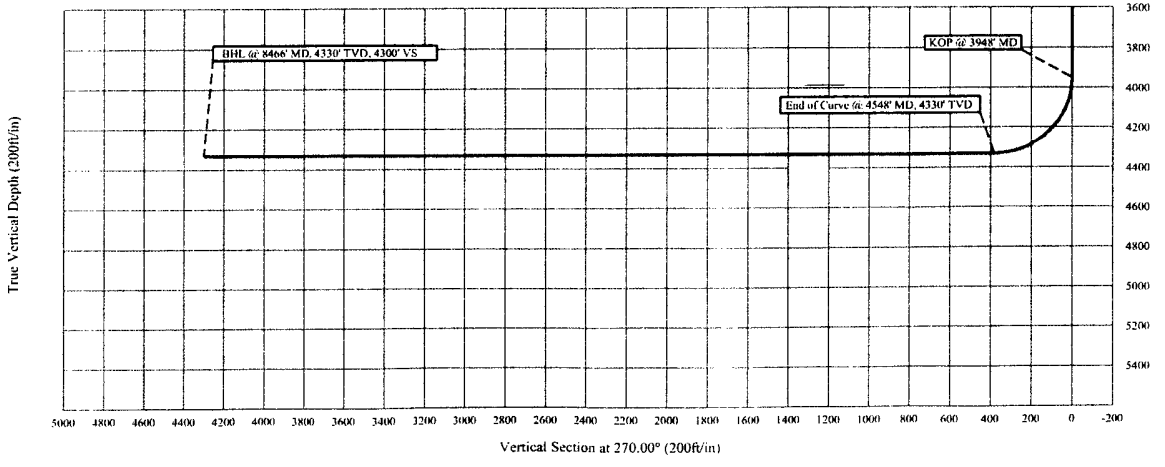
Parallel Petroleum Corp.

Black Box 1921-23 Federal #1
S/2 Sec. 23, T-19-S, R-21-E
Eddy County, New Mexico

COMPANY DETAILS

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





Complete Plan
In CFO Copy

PARALLEL
PETROLEUM CORPORATION

Legals:

Sand Box 1921-24 Federal #1 & Black Box 1921-23 Federal #1

Section 23

Township 19 South, Range 21 East, N.MY.M. Survey

Eddy County, New Mexico

H2S

"Contingency Plan"

CALLAWAY SAFETY EQUIPMENT CO. INC.
1020 W. Hwy. 80 East 3229 Industrial Drive
Odessa, Texas *79765* Hobbs, New Mexico 88240
(432) 561-5049 (877) 422-6345 (505) 392-2973

SURFACE AND OPERATIONS PLAN FOR
DRILLING, COMPLETION, AND PRODUCING

PARALLEL PETROLEUM CORPORATION
BLACK BOX 1921-23 FEDERAL #1
(Well will share a pad with the Sand Box 1921-24 Federal #1)
SHL: 760' FSL AND 300' FEL, SEC 23, T19S, R21E
EDDY COUNTY, NEW MEXICO

LOCATED:

9 miles South of Hope, New Mexico

OIL & GAS LEASE:

NM NM 103570

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:

2,560.00

SURFACE OWNER:

Federal

SURFACE TENANT:

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

POOL:

Wolfcamp (Gas)

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 an existing access road to the Jack in the Box Federal #1. From this point the road will go east 4428' to the Parallel Petroleum, Box Cars 1921-13 Federal #1 location and continue south 2052' to the 3 Lock Box 1921-24 Federal #1. New access road for this well on the subject well location will be 2154' in length. The new access road will be 16' to 24' wide.

B. Surface Material
Caliche from a commercial source.

C. Maximum Grade
Less than five percent.

D. Turnouts
No turnouts are planned on the access road.

E. Drainage Design
No creek or drainage crossings are planned for this section of access road.

F. Culverts
It is not anticipated that any culverts will be needed on the access road at this time. If any drainage areas are crossed other than the low water crossing site mentioned above, a culvert will be used so water is not backed up by the road bed.

G. Gates and Cattle Guards
No gate or cattle guards will be required for this section of 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 well located east of the well site that is operated by the Runyon Ranch may be available or water may 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.

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 from the site.

10. OTHER INFORMATION

A. Topography
The land surface at the well site is relatively level valley or draw surrounded by rolling native grass land, to areas of small ridge tops and side slopes. The regional slope of the site is to the north and east.

B. Soil
Soils are generally shallow tan sands, with heavy lag gravels and rock outcrops.

C. Flora and Fauna
Area vegetation consists of numerous grasses, snakeweed, cholla, yucca prickly pear, agave and creosote.

D. Ponds and Streams
Gardner Draw, an intermittent stream which flows west to east, is located 9000' south of the site. A Crooked Canyon, smaller drainage is located 3000' west and flows north east into Gardner Draw. There are no other rivers, lakes, ponds, or streams in the area.

E. Residences and Other Structures
The Runyon Ranch headquarters are located 5 miles north east of the location.

F. Archaeological, Historical, and Cultural Sites
See archaeological report # SNMAS-06NM-2456/2457/2459/2464
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
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

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.

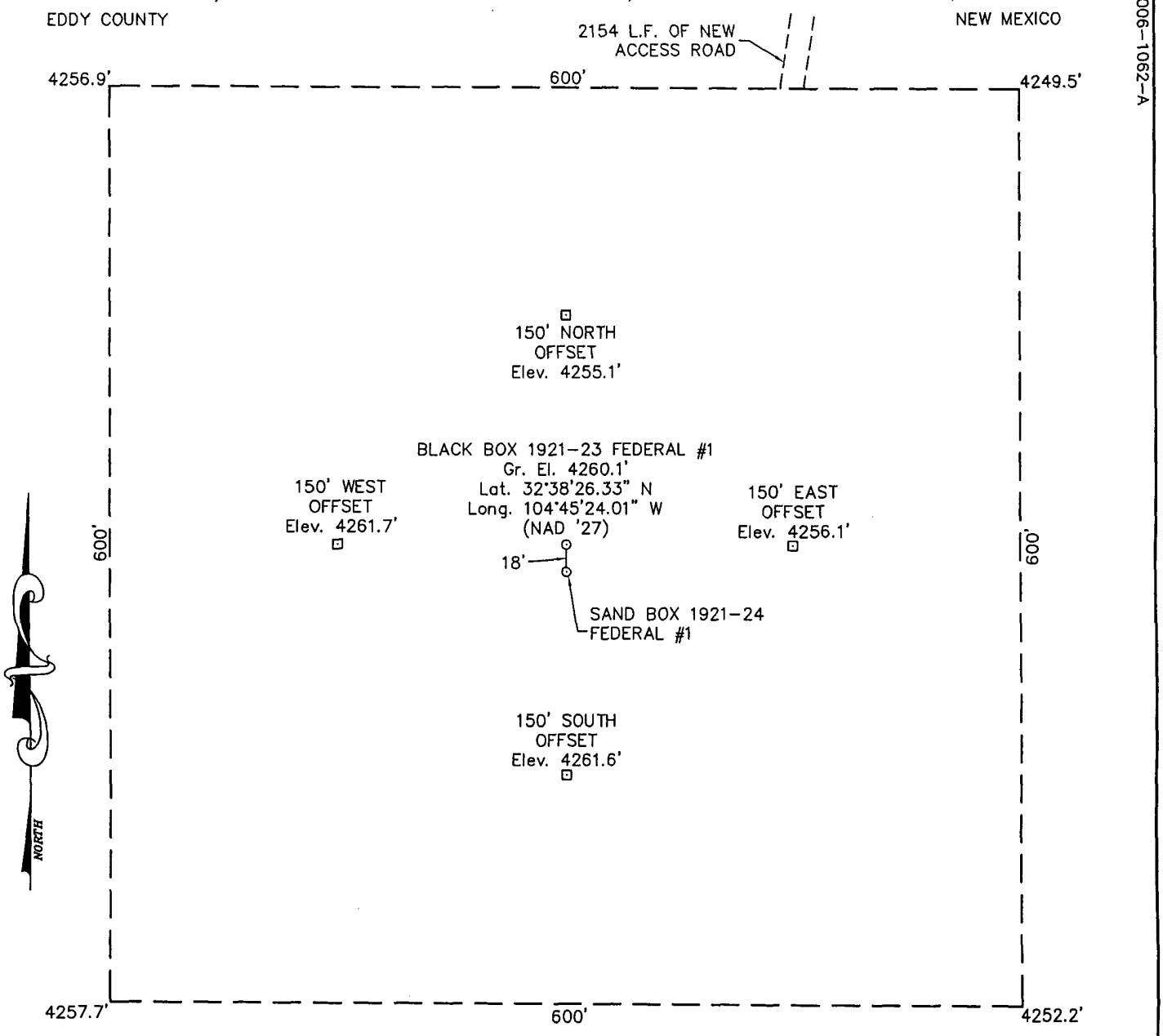
3-8-07
Date

Deane Durham
Name: Deane Durham
Title: Engineer

SECTION 23, TOWNSHIP 19 SOUTH, RANGE 21 EAST, N.M.P.M.

EDDY COUNTY NEW MEXICO

L-2006-1062-A



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 4.2 MILES TO AN ACCESS ROAD ON EAST (LEFT) SIDE OF ROAD, THEN GO EAST ALONG SAID ACCESS ROAD 0.7 MILE TO A NEW ACCESS ROAD ON THE EAST (LEFT) SIDE OF ROAD, THEM GO EAST AND SOUTH 0.8 MILE TO THE WELL PAD FOR THE BOX CARS 1921-13 FEDERAL #1 WELL THEN FROM THE SOUTH LINE OF SAID WELL PAD, GO SOUTH ALONG ANOTHER ACCESS ROAD 0.4 MILE TO THE WELL PAD FOR THE P.O. BOX 1921-23 FEDERAL #1 AND 3 LOCK BOX 1921-24 FEDERAL #1 WELLS, THEN FROM THE SOUTH LINE OF SAID WELL PAD GO SOUTH 0.4 MILE TO THE PROPOSED LOCATION.

100 0 100 200

Graphic Scale in Feet

PARALLEL PETROLEUM CORPORATION

BLACK BOX 1921-23 FEDERAL #1

Located 760' FSL & 300' FEL, Section 23
Township 19 South, Range 21 East, N.M.P.M.
Eddy County, New Mexico

Drawn By: LVA	Date: November 20, 2006
Scale: 1"=100'	Field Book: 348 / 32-38
Revision Date:	Quadrangle: Holt Tank
W.O. No: 2006-1062	Dwg. No.: L-2006-1062-A

WEST COMPANY of Midland, Inc.

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

EXHIBIT C

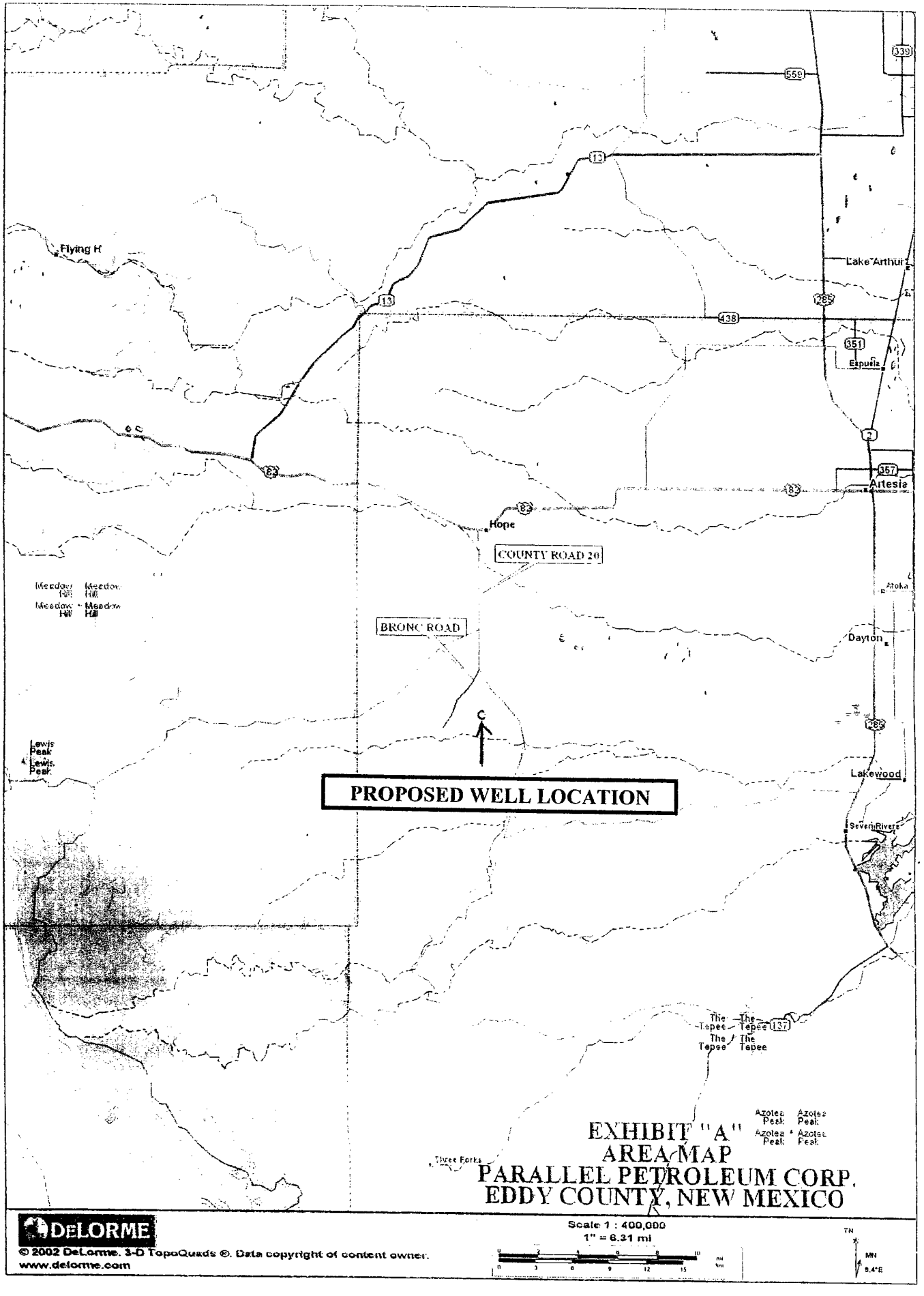


EXHIBIT "A"
AREA MAP
PARALLEL PETROLEUM CORP.
EDDY COUNTY, NEW MEXICO

DeLorme

Scale 1 : 400,000
1" = 6.31 mi

CONDITIONS OF APPROVAL - DRILLING

Operator's Name:	**Parallel Petroleum Corp.**
Well Name & No.	**Black Box 1921-23 Fed # 1**
Location:	**760'FSL, 300'FEL, SEC23, T19S, R21E, Eddy County, NM**
BHL:	**760'FSL, 660'FWL, SEC23, T19S, R21E, Eddy County, NM**
Lease:	**NM-103570**

I. DRILLING OPERATIONS REQUIREMENTS:

A. The Bureau of Land Management (BLM) is to be notified a minimum of 4 hours in advance, at the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 - for wells in Eddy County, in sufficient time for a representative to witness:

1. Spudding
2. Cementing casing: **16** inch **8.625** inch **5.5** inch
3. BOP tests

B. A Hydrogen Sulfide (H2S) Drilling Plan is N/A.

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.

D. 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.

E. If floor controls are required, (3M or Greater) controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

II. CASING:

A. The **8.625** inch surface casing shall be set at **1500 feet** and cement circulated 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, which ever is greater. (This is to include the lead cement)
3. WOC time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds of compression strength, which ever is greater.
4. If cement falls back, Remedial cementing shall be completed prior to drilling out that string.

B. The minimum required fill of cement behind the **5.5** inch production casing is **cement shall extend upward a minimum of 200 feet above the base of the intermediate casing string. If circulation is lost on the surface casing well bore, cement will be circulated to the surface.**

D. If hard band 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.

B. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling below the **8.625** inch casing shall be **2000** 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 the 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 the test is done with a test plug and 30 minutes without a test plug.
5. A variance to test the_____ to the reduced pressure of ___psi with the rig pumps is approved the BOP/BOPE must be tested by an independent service company.

IV. Hazards:

1. Our geologist has indicated that there is potential for lost circulation in the San Andres, Glorieta and Wolfcamp formations.
2. Our geologist has indicated that there is potential for high pressure in the Wolfcamp.
3. Our geologist has indicated that there is medium potential for Cave / Karst features

Engineering may be contacted at 505-706-2779 for variances if necessary.

FWright 3/16/07