

## District I

1625 N. French Dr., Hobbs, NM 88240

## District II

1301 W. Grand Avenue,

## District III

1000 Rio Brazos Road,

## District IV

1220 S. St. Francis Dr.,

State of New Mexico

Oil, Gas, and Natural Resources

Form C-101

May 27, 2004

District Office

D REPORT

As a condition of approval, if during pit construction water is encountered or if water seeps in pits after construction the **OCD MUST BE CONTACTED IMMEDIATELY!**

**As a condition of approval, a closure plan must be submitted and approved prior to the commencement of closure procedures.**

## APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

Operator Name and Address Parallel Petroleum Corp. 1004 N. Big Spring Street, Suite 400, Midland, TX. 79701		OGRID Number 230387
Property Code 35209	Property Name Affirmed	API Number 30-005-63779
Proposed Pool 1 WILDCAT; Wolfcamp GAS (96547)		Proposed Pool 2

## 7 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	33	14S	26E		400	S	1880'	W	Chaves

## 8 Proposed 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
C	33	14S	26E		660'	N	1880'	W	Chaves

## Additional Well Information

11 Work Type Code N	12 Well Type Code G	13 Cable/Rotary R	14 Lease Type Code P	15 Ground Level Elevation 3446'
16 Multiple No	17 Proposed Depth 9300MD, 5244TVD	18 Formation Wolfcamp	19 Contractor NA	20 Spud Date NA
Depth to Groundwater 30'		Distance from nearest fresh water well 1500'		Distance from nearest surface water 3500'
Pit: Liner: Synthetic X 12 mils thick Clay <input type="checkbox"/> Pit Volume: 10,000 bbls Closed-Loop System <input type="checkbox"/> Drilling Method: Fresh Water X Brine <input type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/>				

## 21 Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17-1/2"	13-3/8"	48#	300'	440	Surface
12-1/4"	9-5/8"	36#	1300'	325	Surface
8-3/4"	5-1/2"	17#	TVD 5244'	NA	4310'
Cement to cover all oil, gas & water bearing zones ex- Gilslette					

22 Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

**Well to be Drilled as a Horizontal Wolfcamp test. The attached drilling plan will be utilized for this test and contains details on the cement and mud programs as well as the directional information. The following is a summary of this plan.**

1. Prepare surface location. Move in and rig up drilling rig, spud well and drill and set conductor. Install and test BOP's.
2. Drill 17 1/2" surface hole with rotary equipment to a minimum depth of 300'. Set 13 3/8" casing and cement.
3. Drill 12 1/4" intermediate hole to a minimum depth of 1300'. Set 9 5/8" casing and cement.
4. Drill 8 3/4" production hole 5500' TD and evaluate running mud logs as well as DLL/CNL/LDT/CAL/GR to TD.
5. Set Kickoff point at 4872' and drill and advance hole to a Wolfcamp penetration point at approximately 760 and 790' FSL of section continue drilling to BHL (9300' MD and 5244' TVD).
6. Set 5 1/2" to TD and cement to 4310'. Perforate porosity and stimulate as necessary (specific procedure to be determined).
7. Place well on test.
8. No H2S is anticipated during the drilling of this well.

23 I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines X, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Printed name: Deane Durham

Title: Drilling Engineer

E-mail Address: ddurham@plll.com]

Date: 10-24-05

Phone: 432-684-3727

## OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date: NOV 02 2005

Expiration Date: NOV 02 2006

Conditions of Approval Attached ☐

W. T. Casing of  
13 3/8" & 9 5/8" casing

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., Aztec, NM 87410

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

DISTRICT IV  
2040 South Pacheco, Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 96086	Pool Name WILDCAT WOLF CAMP GAS
Property Code	Property Name AFFIRMED	Well Number 1
OGRID No.	Operator Name PARALLEL PETROLEUM CORPORATION	Elevation 3446'

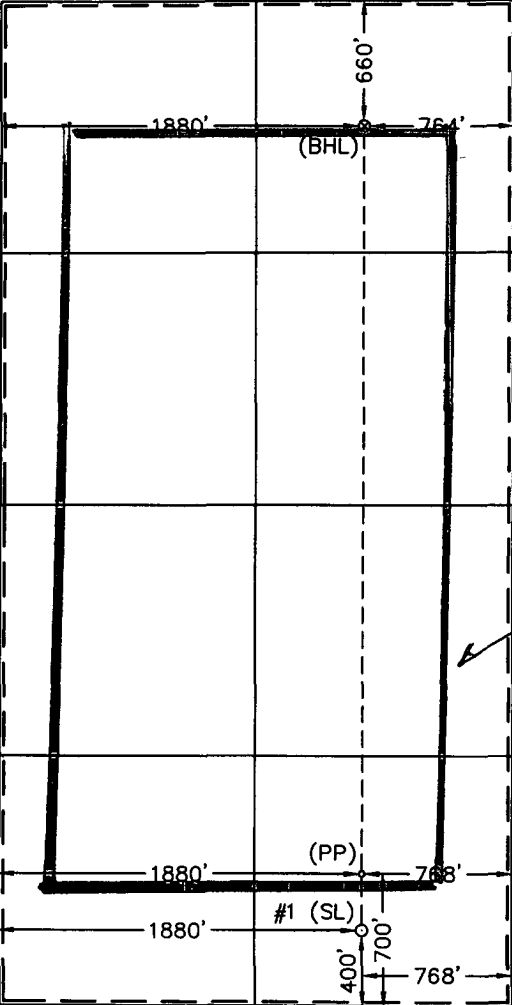
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	33	14 S	26 E		400	SOUTH	1880	WEST	CHAVES

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
C	33	14 S	26 E		660	NORTH	1880	WEST	CHAVES
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

	<table><tr><th colspan="2">Coordinate Table</th></tr><tr><th>Description</th><th>Plane Coordinate</th></tr><tr><td>Affirmed #1</td><td>X = 495,992.1</td></tr><tr><td>Surface Location</td><td>Y = 746,823.0</td></tr><tr><td>Affirmed #1</td><td>X = 495,991.1</td></tr><tr><td>Penetration Point</td><td>Y = 747,122.8</td></tr><tr><td>Affirmed #1</td><td>X = 495,977.3</td></tr><tr><td>Bottom Hole Location</td><td>Y = 751,063.3</td></tr></table> <p>Project Area</p> <p>Producing Area</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>	Coordinate Table		Description	Plane Coordinate	Affirmed #1	X = 495,992.1	Surface Location	Y = 746,823.0	Affirmed #1	X = 495,991.1	Penetration Point	Y = 747,122.8	Affirmed #1	X = 495,977.3	Bottom Hole Location	Y = 751,063.3
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Bottom Hole Location	Y = 751,063.3																

OPERATOR CERTIFICATION

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

Signature  
Gary E. Miller

Printed Name  
Agent

Title  
10-24-05

Date

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my upervison and that the same is true and orrect to the best of my belief.

October 13, 2005

Date Surveyed

Signature & Seal of Professional Surveyor

W.O. Num. 2005-0964

Certificate No. MACON McDONALD 12185

**PARALLEL PETROLEUM CORPORATION**  
**AFFIRMED #1**  
**SL: 1880' FWL AND 400' FSL, BHL: 1880' FWL AND 660' FNL**  
**SEC 33, T14S, R26E**  
**CHAVES COUNTY, NEW MEXICO**

**Objective**

Drill a vertical well through the Wolfcamp pay. Log and evaluate for a sidetrack to horizontal in the Wolfcamp.

**Expected Geologic Tops**

Est GL from topo: 3446', KB 3458'.  
Glorieta 2535'  
Tubb 3570'  
Abo Shale 4310'  
Wolfcamp 5245'  
Wolfcamp Shale 5430'

**Well Geometry**

- 13 3/8" casing at 300'
- 9 5/8" casing at 1300'
- Set kick-off plug for horizontal through the zone of interest
- 5 1/2" casing through the horizontal Wolfcamp; Cement per completion.

**Casing Program**

<u>Hole</u>	<u>MD</u> <u>(ft)</u>	<u>Casing</u>	<u>Weight</u>	<u>Grade</u>	<u>Coupling</u>	<u>COMMENT</u>
17-1/2"	0 – 300	13-3/8"	48	H40	ST&C	Must be below 300' (+KB).
12-1/4"	0 – 1300	9-5/8"	36	J55	LT&C	
8-3/4"	0 – 5500'	5-1/2"	17	N80	LT&C	Run through the horizontal lateral.

### **Casing Cementing Program**

13-3/8" slurry: 440 sacks Class C + 2% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 56.3% fresh water

9-5/8" slurry: Lead: 125 sacks (50:50) Poz (Fly Ash): Class C + 5% bwow Sodium Chloride + 10% bwoc Bentonite + 151.7% fresh water. Tail: 200 sacks Class C + 1% bwoc Calcium Chloride + 56.3% fresh water

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

Note: 5-1/2" Cement per completion procedure. Top of Cement should be a minimum of 100' above Abo Shale at 4310'.

### **Mud Program**

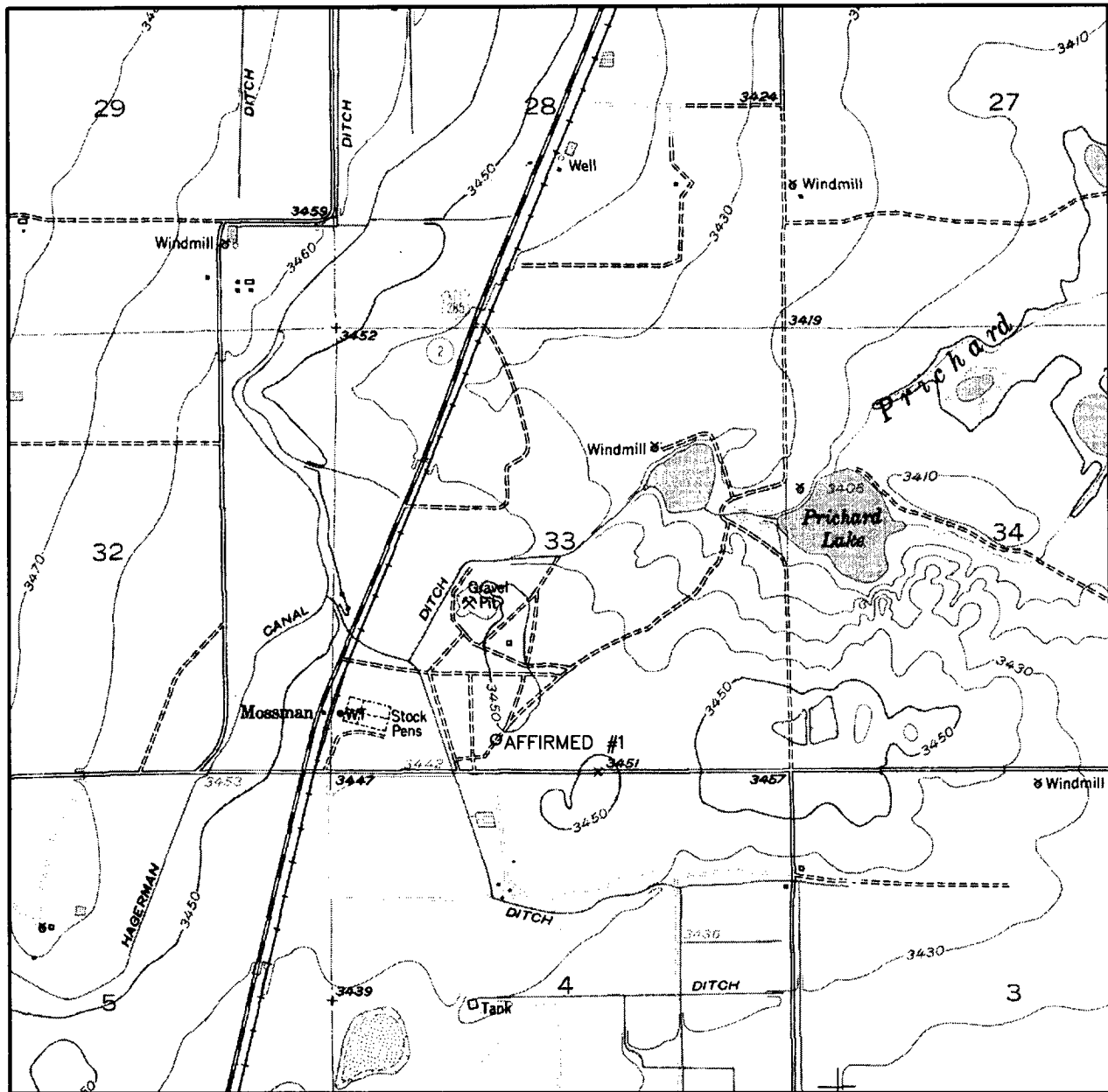
<u>Depth</u>	<u>Hole</u>	<u>MW</u>	<u>Visc.</u>	<u>WL</u>	<u>Synopsis</u>
0 – 300	17-1/2"	8.4	32 - 38	No control	Fresh gel Lime flocc.(outer) reserve. Fresh gel sweeps, paper & cotton seed hulls for losses.
300 - 1300	12-1/4"	8.4 – 8.6	28 - 29	No control	FRESH WATER mud only to 1200 ft. Severe loss potential. Circulate inner reserve. LCM: paper, fiber, cotton seed hulls.
1300 – 4100	8-3/4"	8.6 – 9.2	28 -29	No control	Cut brine. Start w/existing & add brine t/80K-120K chlorides
4100 – TD	8-3/4"	8.9 – 9.5	38 - 45	6 - 10	XCD/Starch polymer as req'd for hole cleaning. Lubricants.
KOP – TD Horizontal	8-3/4" & 7-7/8"	8.9 – 9.5	38 - 45	6 - 10	XCD/Starch polymer as req'd for hole cleaning. Lubricants.

[illegible]

**HERON**

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

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:  
HAGERMAN - 10'

SEC. 33 TWP. 14-S RGE. 26-E

SURVEY N.M.P.M.

COUNTY CHAVES

DESCRIPTION 400' FSL & 1880' FWL

ELEVATION 3446'

OPERATOR PARALLEL PETROLEUM CORPORATION

LEASE AFFIRMED

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



**WEST  
COMPANY**  
of Midland, Inc.

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



# PARALLEL

Petroleum Corporation

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

October 21, 2005

New Mexico Oil conservation Division  
1301 W. Grand Ave.  
Artesia, New Mexico 88210

Re: Hydrogen Sulfide Potential  
Hagerman Area Wolfcamp Program  
Chavez County, New Mexico

Gentlemen:

Parallel Petroleum Corporation operates the Seabiscuit #1 well located in Section 33, T-14-S, R-26-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.

Should you need any additional information regarding this issue, please contact me at the address or phone number listed above.

Sincerely,

Deane Durham  
Drilling Engineer

# **PARALLEL** SURVEY CALCULATION PROGRAM PETROLEUM CORPORATION

OPERATOR:	Parallel Petroleum Corporation		Supervisors:	
WELL:	Affirmed #1			
LOCATION:	Sec. 33 T-14-S R-26-E			
API NUMBER:				
COMMENTS:				
			MAG DEC. (-/+)	
			GRID CORR. (-/+)	
			TOTAL CORR. (-/+)	0.0

DATE: 10/20/05 TIME: 3:14 PM TRUE TO GRID ☐

MINIMUM CURVATURE CALCULATIONS(SPE-3362)									PROPOSED DIRECTION		0.0	TARGET TRACKING TO CENTER	
SVY	MD	INC	TRUE	VERT								ABOVE(+)	RIGHT(+)
NUM			AZM	TVD	SECT	N-S	E-W	DLS/				BELOW(-)	LEFT(-)
								100					
TIE	0	0.0	0.0	0.0	0.0	0.0	0.0						
1	4863	0.0	0.0	4863.0	0.0	0.0	0.0	0.0				382.0	0.0
2	4873	1.5	0.0	4873.0	0.1	0.1	0.0	15.0				372.0	0.0
3	4883	3.0	0.0	4883.0	0.5	0.5	0.0	15.0				362.0	0.0
4	5462	90.0	0.0	5244.3	381.3	381.3	0.0	15.0				0.7	0.0
5	9300	90.0	0.0	5244.3	4219.3	4219.3	0.0	0.0				0.7	0.0

KOP @ 4863' MD  
 BUR = 15 DEG per 100 FT  
 End Curve @ 5462' MD, 5244.3' TVD  
 BHL @ 9300' MD, 5244.3' TVD, 4219.3' VS



# Parallel Petroleum Corp.

Affirmed #1

Section 33, T 14-S, R 26-E  
Chaves County, New Mexico

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

