Form 3160'-3 (April 2004)

N.M. Oil Cond. DIV-Dist. 2 1301 W. Grand Avenue

Artesia, NM 88210

JUN 20 2007

FORM APPROVED OMB No 1010 D-ARTESIA Expires March 37, 2007

Lease Serial No.

NM NM 112249

TITED STATES DEPARTMENT OF THE INTERIOR

BUREAU	OF LAND	MANAGEMENT	

APPLICATION FOR PERMIT TO	6. If Indian, Allotee or Tribe Name							
la. Type of work: DRILL REENTE	R		7 If Unit or CA Agreeme	*	72			
lb. Type of Well. Oil Well Gas Well Other	Single Zone Multip	le Zone	8. Lease Name and Well Thunder Gulch 15	No. 525-4 Fed Com #1	36573			
	130387		9_API Well No.	5-63948	3			
3a. Address 1004 North Big Spring, Suite 400 Midland, Texas	3b. Phone No. (include area code) 432/684-3727	ldca	10. Field and Pool, or Expl Wolfcamp	oratory	_			
4. Location of Well (Report location clearly and in accordance with any At surface SHL 1880' FSL AND 190' FEL Sec At proposed prod. zone BHL 1880' FSL AND 660' FEL Sec	5, T15S-R25E		11/Sec., T. R. M. or Blk a 4-T15S-R25E	nd Survey or Area				
14. Distance in miles and direction from nearest town or post office* 5 miles North of Artesia, New Mexico			12. County or Parish Chaves 13. State NM		-			
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 660'	Distance from proposed* location to nearest property or lease line, ft. 16. No. of acres in lease 17. Spaci							
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 2500'	19. Proposed Depth 5500'		BIA Bond No. on file 000265		•			
21 Elevations (Show whether DF, KDB, RT, GL, etc.) GL 3546'	22. Approximate date work will star 05/15/2007	rt*	23 Estimated duration 30 days		_			
The following, completed in accordance with the requirements of Onshor			CONTROLLED WATER I	BASIN	_			
Well plat certified by a registered surveyor. A Drilling Plan A Surface Use Plan (if the location is on National Forest System SUPO shall be filed with the appropriate Forest Service Office)	4. Bond to cover t Item 20 above). Lands, the 5. Operator certific	he operation cation specific inf	ns unless covered by an exi		:			
25. Signature Clane Chan	Name (Printed/Typed) Deane Durham		Da	ite 3-19-07	_			
Title Engineer, Parallel Petroleum Corporation					_			
Approved by (Strongling) R A R R R R	Name (Printed/Tyned)		l D	Ad IAI 4 O 6	200.00			

Acting Assistant Field Manager, Office Offic

Title

APPROVED FOR 2 YEARS

Lands And Minerals

ROSWELL FIELD OFFICE Application approval does not warrant or certify that the applicant holds legal or equitable_title to those rights in the

itle the applicant to

conduct operations thereon Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime foly States any false, fictitious or fraudulent statements or representations as to any n

*(Instructions on page 2)

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

> APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

DECLARED WATER BASES

CASING MUST BE CIRCULATED **WITNESS**

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

NOTE:

State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION

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

1220 South St. Frances Dr. Santa Fe, NM 87505

☐ AMENDED REPORT

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

Pool Code	Pool Name			
7 (489	WILDUI, WOLF	CAMA		
Property N	lame 1	Well Number		
THUNDER GULCH 15	525-4 FED COM	1		
Operator N	lame	Elevation		
PARALLEL PETROLEUM	M CORPORATION	3546'		
	THUNDER GULCH 15	Pool Code Pool Name 97489 WILDCIT; WOLF Property Name THUNDER GULCH 1525-4 FED COM Operator Name PARALLEL PETROLEUM CORPORATION		

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	5	15 S	25 E		1880	SOUTH	190	EAST	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
1	4	15 S	25 E		1880	SOUTH	660	EAST	CHAVES
Dedicated Acres	Dedicated Acres Joint or Infill Co		nsolidation (Code Or	der No.		• "	<u> </u>	<u> </u>
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

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. Project Producing Area Area 820, 841, 190 89'41'35" (BHL 3917 (SL) 660 660 880, 880, 880 Surface Location <u>Penetration Point</u> **Bottom Hole Location** Plane Coordinate X = 463,053.3 Y = 742,891.2 Plane Coordinate X = 466,969.5 Y = 742,870.2 Plane Coordinate X = 462,203.5 Y = 742,895.7

W

Geodetic Coordinate Lat. 33°02'31.96" N Long. 104°27'14.05" W (NAD '27)

Geodetic Coordinate Lat. 33°02'32.00° N Long. 104°27'24.03" W (NAD '27)

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 bollom 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

Deane Dunlam

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

January 29, 2007

Geodetic Coordinate
Lat. 33°02'31.80" N
Long. 104°26'28.04."
(NAD '27)

Date of Survey
Signature & Seal of Professional Surveyor 12185

> 2007, 007.2... W.O. Num.

Certificate No. MACON MCDONALD 12185

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 112249

Legal Description of Land: Thunder Gulch 1525-4 Fed Com #1

SHL: 1880' FSL and 190' FEL, Sec. 5, T15S, R25E BHL: 1880' FSL and 660' FEL, Sec. 4, T15S, R25E

Chaves County, New Mexico

Formation(s) (if applicable: Wolfcamp

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

BLM Bond File No: NMB000265

Name: Deane Durham

Title: Engineer

ATTACHMENT TO FORM 3160-3 THUNDER GULCH 1525-4 FED COM #1

Surface Hole Location
1880 FSL AND 190 FEL, SEC 5, 15S, 25E
Bottom Hole Location
1880 FSL AND 660 FEL, SEC 4, 15S, 25E
CHAVES 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. <u>ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS</u>

Glorieta 2565'(+981') Tubb 3575'(-29') Abo Shale 4325' (-779') Wolfcamp 5250' (-1704') Wolfcamp Shale 5425'(-1879')

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

Fresh water

65'

Oil and Gas

Wolfcamp 5250' (-1704')

No H₂S gas should be encountered

4. <u>CASING AND CEMENTING PROGRAM</u>

Casing Size	<u>From To</u>	<u>Weight</u>	<u>Grade</u>	<u>Joint</u>
16" conductor	0'-120'			
8 5/8"	0' – 1400'	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.

THUNDER GULCH 1525-4 FED COM #1 Page 2

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

<u>Note</u>: 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 1400', 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 kick off point at approximately 4,400'.
- e. Build angle at 6.7 degrees per 100' to 90 degrees and hold.
- f. Drill 7 7/8" horizontal drain hole to a terminus of 660' FEL approximately 9.690'.
- g. Run 5 1/2" 17# N-80 CSG to TD. Cement with 750 sx Class C Acid Soluble
- h. Circulate to surface or run temperature survey to verify tie in to surface casing.
- i. Rig Down Rotary Tools

THUNDER GULCH 1525-4 FED COM #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 1,400' with 8.3 ppg Fresh Water system and viscous sweeps for hole cleaning.
- c. The production section from 1,500' to 4,300' will utilize a cut brine mud system from 8.8 to 9.2 ppg.
- d. The remaining production section from 4,300' 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 are planned. This is the second well on a dual pad, so no open-hole logs are planned, however, additional open-hole logs, drill stem tests, cores and sidewall cores are possible.

9. <u>ABNORMAL CONDITIONS, PRESSURES, TEMPERATURES & POTENTIAL HAZARDS</u>

None anticipated.

BHP expected to be 1,900 psi.

10. ANTICIPATED STARTING DATE:

It is planned that operations will commence around forth quarter of 2007 with drilling and completion operation lasting about 35 days.

SURFACE AND OPERATIONS PLAN FOR DRILLING, COMPLETION, AND PRODUCING

PARALLEL PETROLEUM CORPORATION THUNDER GULCH 1525-4 FED. COM. #1

(Will share a location with the Grind Stone 1525-5 #1) SHL: 1880' FSL AND 190' FEL, SEC 5, T15S, R25E CHAVES COUNTY, NEW MEXICO

LOCATED:

8 miles north of Artesia, New Mexico

OIL & GAS LEASE:

NM NM 112249

RECORD LESSEE:

J Bar Cane Inc. P.O. Box 16 Stanley, NM 87056

BOND COVERAGE:

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

ACRES IN LEASE:

2435.41

SURFACE OWNER:

Ernest Cherry, in care of Marshall and Marisela Decker 130 Sage Brush Valley Rd Hagerman, NM 505-626-3877

POOL:

Wolfcamp (Gas)

THUNDER GULCH 1525-4 FED. COM. #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
- I. Blow Out Preventer (BOP) Schematic
- J. Choke Manifold Schematic
- K. Estimated Horizontal Survey Calculation Program
- L. Estimated Wellbore Plot

1. <u>EXISTING ROADS</u>

- 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. <u>ACCESS ROADS</u>

A. Length and Width

Access to this location will be from State Highway 285. A cattle guard has been placed in the fence and an access road constructed to the Parallel Petroleum Company, Forgo State #1 and the Swale 1525-16 State #1. From the Forgo location, go west 2500' on the exiting access road and turn right on new access road and go through a new cattle guard. Continue north approximately 2 miles to location. The road will be surfaced with 4 to 6 inches of caliche and is 16' wide.

B. Surface Material

Caliche from a commercial source.

C. <u>Maximum Grade</u>

Less than five percent.

THUNDER GULCH 1525-4 FED. COM. #1 Page 3

D. Turnouts

No turnouts will be constructed.

E. <u>Drainage Design</u>

No Change.

F. Culverts

None necessary.

G. Gates and Cattle Guards

A cattle guard has been constructed at the entrance off State Highway 285, and a new cattle guard will be constructed in the fence between sections 9 and 16.

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. If no well is drilled water will be purchased from a commercial source.

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.

THUNDER GULCH 1525-4 FED. COM. #1

Page 4

- 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.

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 rolling native grass 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.

THUNDER GULCH 1525-4 FED. COM. #1 Page 5

D. Ponds and Streams

Walnut Creek, an intermittent stream runs west to east and is located approximately 5 miles south of the site. Drainage from the site will be to the south and east, to a drainage that eventually flows to Walnut Creek. A playa is located 1.5 miles east of the site and no drainage from this site will flow to this lake.

E. Residences and Other Structures

Homes are located 3.5 miles west and east of the site.

F. Archaeological, Historical, and Cultural Sites

See archaeological report submitted by:

Southern New Mexico Archaeological Services, Inc.,

P.O. Box 1

Bent, New Mexico 88314 Phone 505-671-4797

G. Land Use

Undeveloped pasture

H. Surface Ownership:

Fee, see page one

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. <u>CERTIFICATION</u>

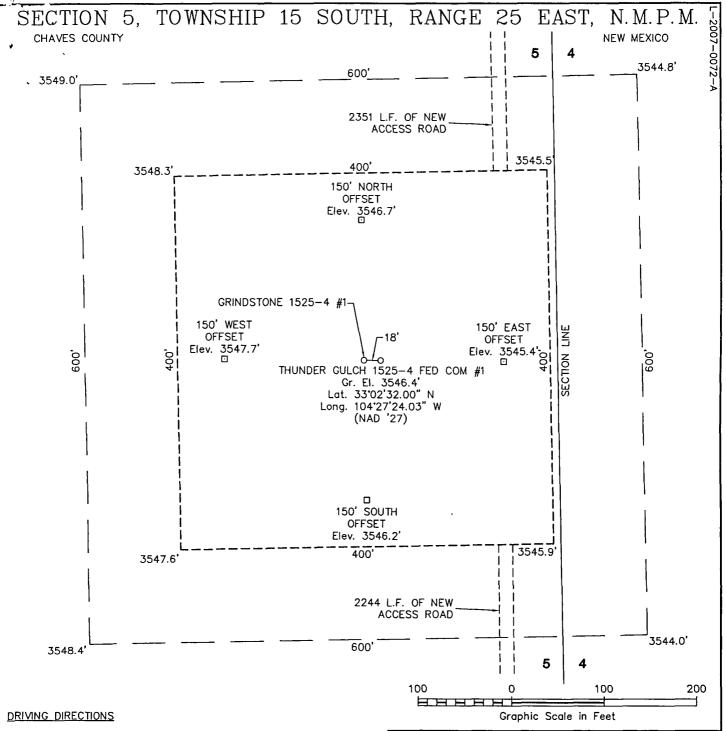
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated 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.

3-19-07

Date

Name: Deane Durham

Title: Engineer



FROM THE INTERSECTION OF U.S. HIGHWAY 380 and 285 IN ROSWELL, NM GO SOUTH ON SAID U.S. HIGHWAY 285 ABOUT 27 MILES TO A POINT WHERE AN ACCESS ROAD BEGINS ON THE WEST (RIGHT SIDE) OF SAID HIGHWAY 285, THEN GO WEST ON SAID ACCESS ROAD 0.8 MILES TO A POINT, WHERE ANOTHER ACCESS ROAD TURNS NORTHWEST, THEN GO NORTHWEST AND NORTH ALONG SAID ACCESS ROAD 0.4 MILE PASS THE WELL PAD FOR THE WAR EMBLEM 1525–9 FED COM #1 AND FUNNY CIDE 1525–8 FED COM #1, AT 0.9 MIE PASS THE WELL PAD FOR THE GIACOMO 1525–8 FED COM #1 AND SMARTY JONES 1525–9 #1, CONTINUING IN ALL 1.4 MILES TO THE PROPOSED LOCATION.



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

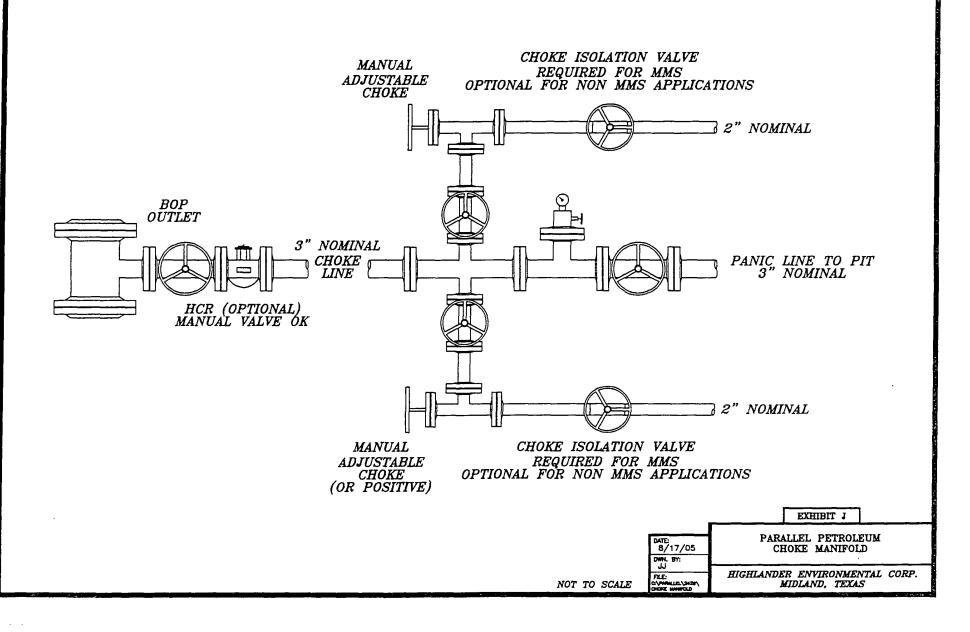
PARALLEL PETROLEUM CORPORATION

THUNDER GULCH 1525-4 FED COM #1

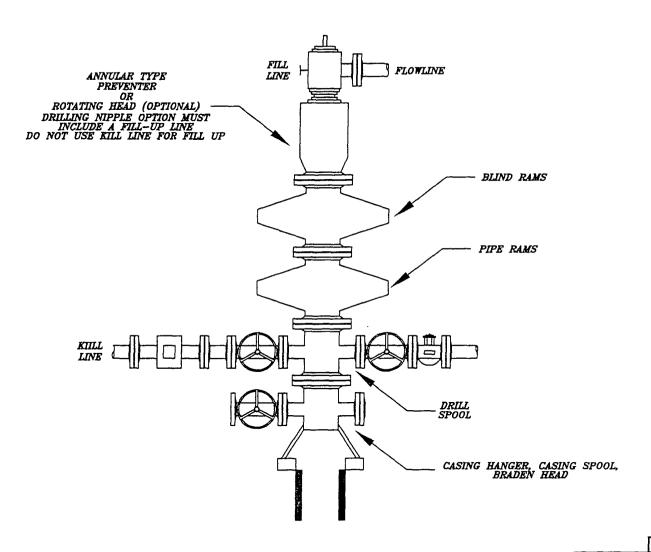
Located 1880' FSL & 190' FEL, Section 5 Township 15 South, Range 25 East, N.M.P.M. Chaves County, New Mexico

Drawn By: LVA	Date: March 21, 2007
Scale: 1"=100'	Field Book: 365 / 1-4, 29-30
Revision Date:	Quadrangle: Hagerman SW
W.O. No: 2007-0072	Dwg. No.: L-2007-0072-A

CHOKE MANIFOLD 5M SERVICE



MINIMUM BOP SCHEMATIC



DATE: 7/26/05 JJ SY: FILE: C:\PMMLET\3+38\ 80P \$CHEMIC

HIGHLANDER ENVIRONMENTAL CORP. MIDLAND, TEXAS

EXHIBIT I

PARALLEL PETROLEUM BOP SCHEMATIC

NOT TO SCALE

11	PET	AR	A L	LE		IRVEY C	ALCULA	ATION	I PROGF	RAM
OPER	ATOR:		Parallel Po	troleum (Corporation	on	Supervisor	s:		
WELL	1: 1: 1:		Thunder G	ulch 1525	5-4 FED C	OM #1		· · · · · · · · · · · · · · · · · · ·		
LOCA	TION:	1777.7	S/2 Sec. 4	T-15-S R-	25-E				***************************************	
API N	UMBEF	₹: '.:'								
		•	COMM	ENTS:						1
									EC.(-/+) ORR.(-/+)	
								TOTAL	CORR.(-/+)	0.0
	:	DATE:	03/06/07		TIME:	7:39 AM	TRUE TO GRI	D		▼ 33
MINIM	IM CURV	ATURE C	ALCULATION	IS(SPE-3362	P)	ROPOSEDI	DIRECTION	90.0	TARGET 1	RACKING NTER
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	4400	0.0	0.0	4400.0	0.0	0.0	0.0	0.0	850.0	0.0
2	4410	0.7	90.0	4410.0	0.1	0.0	0.1	6.7	840.0	0.0
3	4420	1.3	90.0	4420.0	0.2	0.0	0.2	6.7	830.0	0.0
4	5736	90.0	90.0	5250.6	850.5	0.0	850.5	6.7	-0.6	0.0
5	9690	90.0	90.0	5250.6	4804.5	0.0	4804.5	0.0	-0.6	0.0

KOP @ 4400' MD BUR = 6.7 DEG per 100 FT End Curve @ 5736' MD, 5250' TVD BHL @ 9690' MD, 5250' TVD, 4804.5' VS

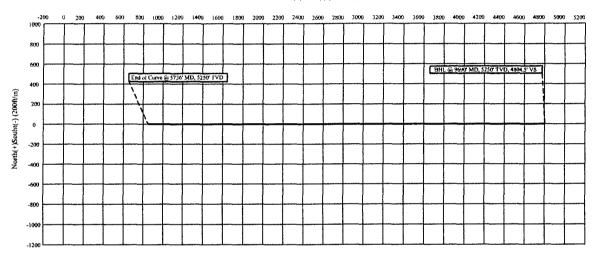
Parallel Petroleum Corp.

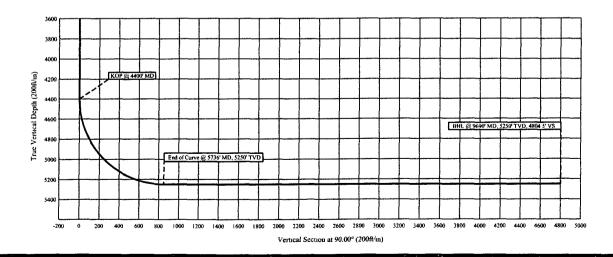
COMPANY DETAILS

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

Thunder Gulch 1525-4 Fed. Com. #1 S/2 Sec. 4, T-15-S, R-25-E Chaves County, New Mexico

East(+)/West(-) (200fl/in)







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

August 24, 2006

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 and the Seabiscuit #2 wells located in Section 33, T-14-S, R-26-E and the Dash for Cash #1 in Section 4, T-15-S, R-26-E. These wells were tested in the Wolfcamp formation and did not have any indications of hydrogen sulfide from this formation. Please see the gas analysis attached to this letter. We believe the potential for H2S 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

Wildcat Measurement Service

P.O. Box 1836

Artesia. New Mexico 88211-1836

TollFree #888-421-9453 Office #505-746-3481

"Quality and Service is our First Concern"

PDS 06/25/00

Run No. Date Run 260728-01 07/28/2006

Date Sampled 07/27/2006

GPANGL.L62

Real Calc. Specific Gravity: 0.7159 Field Specific Gravity: 0.0000

Analysis for: PARALLEL PETROLEUM CORPORATION

Well Name: DASH FOR CASE #1

Field:

Sta. Number: Purpose: SPOT

Sampling Temp: 60

Volume/day:

Pressure on Cylinder: 733

DEG F

PSIG

Producer: PARALLEL PETROLEUM CORP.

County: CHAVES

State: NM

Pressure Base: 14.7300

Real BTU Dry: 1092.27 Real BTU Wet: 1073.26

Standard Pressure: 14.6960

BTU Dry: 1086.59

BTU Wet: 1067.68

% Factor: 0.9971

Avg Kol Weight: 20.6848

Avg CuPt/Gal: 56.8397

26 Lb Product: 0.4422 Methane+ GPM: 17.0215

Rthane+ GPM: 3.3555 Propane+ GPM: 1.5531 Butane+ GPM: 0.7199 Pentane+ GPM: 0.2953

N Value: 1.2913

Sampled By: DON NORMAN Atmos Temp: 91 DRG P

Pormation:

Line Pressure: 746.2 PSIA

GAS COMPONENT ANALYSIS

Hol &

GPM

Carbon Dioxide CO2 5.6514

Nitrogen 1.8667 Hydrogen Sulfide H2S 0.0000

Hethane C1 80.6277 Ethane C2 6.7430 3.0262 Propane C3 Iso-Butane IC4 0.4434

0.1450 NC4 0.8870 0.2796 Nor-Butane IC5 0.2361 0.0864 Iso-Pentane NC5 0.2341 0.0848 Nor-Pentane

0.2844 Hexanes Plus C6+ 0.1241

TOTAL

100.0000

3.3555

1.8023

0.8332

REMARKS:

H2S IN GAS STREAM: NONE DETECTED

Fri Jul 28 15:04:04 2006

Approved by: DON NORMAN

AUG 09 2006

Wildcat Measurement Service P.O. Rox 1836

Artesia. New Mexico 88211-1836 TollFree 1888-421-9453

Office #505-746-3481 "Quality and Service is our First Concern" PDS 06/25/00

Run No. 260728-02 Date Run 07/28/2006

GPANGL.L62

Date Sampled 07/27/2006

Analysis for: PARALLEL PETROLEUM CORPORATION

Well Name: SEABISCUIT #2

Pield:

Sta. Number:

Purpose: SPOT

Sampling Temp: 60 Volume/day:

Pressure on Cylinder: 576

DEG P

PSIG

GAS COMPONENT ANALYSIS

Nol %

GPN

1.6534

3.8765

Nitrogen **X**2 1.1954 Hydrogen Sulfide H28 0.0000

Carbon Dioxide CO2

Methane C1 84.4558 Ethane C2 6.1856

Propane C3 2.4877 0.6850 Iso-Butane IC4 0.3548 0.1161 Nor-Butane NC4 0.7054 0.2224 Iso-Pentane IC5 0.1941 0.0710

Nor-Pentane NC5 0.1929 0.0699

0.3518 0.1535 Hexanes Plus C6+

TOTAL

100.0000

2.9711

REMARKS:

H2S IN GAS STREAM: NONE DETECTED

Fri Jul 28 15:04:04 2006

Approved by: DON NORMAN

Producer: PARALLEL PETROLEUM CORP. State: XM

County: CHAVES

Sampled By: DON NORMAN Atmos femp: 90 DEG F

Pormation:

Line Pressure: 589.2 PSIA

Pressure Base: 14.7300

Real BTU Dry: 1098.66

Real BTU Wet: 1079.53 Real Calc. Specific Gravity: 0.6842

Field Specific Gravity: 0.0000

Standard Pressure: 14.6960

BTU Dry: 1093.16 BTU Wet: 1074.14

% Factor: 0.9973 N Value: 1.2930

Avg Hol Weight: 19.7705 · Avg CuPt/Gal: 56.9423 26 Lb Product: 0.4521

Methane+ GPM: 17.2860 Rthane+ GPM: 2.9711 Propane+ GPM: 1.3178 Butane+ GPM: 0.6328

Pentane+ GPM: 0.2944

WELL DRILLING REQUIREMENTS

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III. WELL SUBSURFACE REQUIREMENTS:

A. GENERAL DRILLING REQUIREMENTS:

- 1. The Bureau of Land Management (BLM) is to be notified at (505) 627-0272 in sufficient time for a representative to witness:
- a. Spudding
- b. Cementing casing: 8-5/8 inch 5-1/2 inch
- 2. 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.
- 3. Include the API No. assigned to well by NMOCD on the subsequent report of setting the first casing string.

B. CASING:

- 1. <u>8-5/8</u> inch surface casing should be set <u>at approximately 1400 feet</u>, below usable water and circulate cement to the surface. If cement does not circulate to the surface, the Roswell Field Office shall be notified at (505) 627-0275 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. Minimum required fill of cement behind the <u>5-1/2</u> inch production casing is <u>sufficient to tie back 500 feet above</u> the uppermost perforation in the pay zone.

C. PRESSURE CONTROL:

- 1. Before drilling below the <u>8-5/8</u> inch surface casing, the blowout preventer assembly shall consist of a minimum of One Annular Preventer or Two Ram-Type Preventers and a Kelly Cock/Stabbing Valve.
- 2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 2000 psi.
- 3. The BOPE shall be installed before drilling below the <u>8-5/8</u> inch surface casing and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.
- a. The results of the test will be reported to the BLM Roswell Field Office at 2909 West Second Street, Roswell, New Mexico 88201.
- b. 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.
- c. Testing must be done in a safe workman like manner. Hard line connections shall be required. mud returns from the well.

IV. ON LEASE - WELL REQUIREMENTS:

A. The holder shall post signs identifying the location permitted herein with the requirements contained in Onshore Oil and Gas Order #1 and 43 CFR 3162.6.

B. The following data is required on the well sign that shall be posted in a conspicuous place on the well pad. The communitization agreement number shall be posted on the well sign. The sign shall be kept up with current identification and shall be legible for as long as the well is in existence:

Operator Name: Parallel Petroleum Corporation

Well Name & No.: Thunder Gulch 1525-4 Federal Com. #1H

Lease No.: NM-112249

Footage: SL; Section 5, 1880' FSL & 190' FEL & BHL; Section 4, 1880' FSL & 660' FEL

Location: T. 15 S., R. 25 E.

- C. UPON ABANDONMENT OF THE WELL, THE SAME INFORMATION SHALL BE INSCRIBED ON THE DRY HOLE MARKER WITH A BEADED WELD.
- D. The approval of the APD does not in any way imply or grant approval of any on-lease, off-lease, or off-unit action(s). It is the responsibility of the holder to obtain other approval(s) such as rights-of-way from the Roswell Field Office or other agencies, including private surface landowner(s).
- E. All vehicles, including caterpillar track-type tractors, motor graders, off-highway trucks and any other type of motorized equipment that is used in the construction of the access road and well pad shall be confined to the area(s) herein approved. The drilling rig that is used to drill the well shall also be confined to the approved area(s).

F. Containment Structure Requirement:

- 1. A containment structure or earthen dike shall be constructed and maintained around all storage facilities/batteries. The containment structure or earthen dike shall surround the storage facilities/batteries.
- 2. The containment structure or earthen dike shall be constructed two (2) feet high around the facilities/batteries (the containment structure or earthen dike can be constructed higher than the two (2) feet high minimum).
- 3. The perimeter of the containment structure or earthen dike can be constructed substantial larger for greater holding capacity of the contents of the largest tank.
- 4. The containment structure or earthen dike shall be constructed so that in case of a spill the structure can contain the entire contents of the largest tank, plus 24 hour production, within the containment structure or earthen dike, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

WELL DRILLING REQUIREMENTS

G. Painting Requirement:

All above-ground structures (e.g.: meter houses, tanks, above ground pipelines, and related appurtenance, etc.) not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard or supplemental Environmental Colors" designated by the Rocky Mountain Five-State Interagency Committee. The color selected for painting all the well facilities is "Olive Drab 18-0622 TPX" (Colors derived from "PANTONE" For Architecture and Interiors Color Guide).

H. Fence Requirement:

The holder shall minimize disturbance to existing fences and other improvements on public land. The holder is required to promptly repair impacted improvements to at least their former state. On private surface the holder shall contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates shall be allowed unless approved by the Authorized Officer.

I. Open-vent Exhaust Stack Requirements:

- 1. All open-vent exhaust stacks associated with heater-treater, separators and dehydrator units shall be modified to prevent birds and bats from entering them and to the extent practical to discourage perching and nesting.
- 2. New production equipment installed on federal leases after November 1st, 1993, shall have the open-vent exhaust stacks constructed to prevent the entry of birds and bats and to the extent practical, to discourage perching, and nesting.

V. Invasive and Noxious Weeds Requirement:

- A. The holder shall be held responsible if noxious weeds become established within the area. Evaluation of the growth of noxious weeds shall be made upon discovery. Weed control will be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipelines, and adjacent land affected by the establishment of weeds due to this action. The holder is responsible for consultation with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policy.
- B. The holder shall insure that the equipment and or vehicles that will be used to construct, maintain and administer the access roads, well pad and resulting well are not polluted with invasive and noxious weed seed. Transporting of invasive and noxious weed seed could occur if the equipment and vehicles were previously used in noxious weed infested areas. In order to prevent the spread of noxious weeds, the Authorized Officer shall require that the equipment and vehicles be cleaned with either high pressure water or air prior to construction, maintenance and administration of the access roads, well pad, and resulting well.

VI. <u>SPECIAL REQUIREMENT(S):</u>

A. Low-profile facilities no greater than eight-feet-high shall be used. If necessary, multiple tanks shall be used.