301 T

OCD-ARTESIA

Form 3160-3 1,2004)

UNITED STATES

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED OCD - ARTESIA

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

Lease Serial No. NM NM 103570

6. If Indian, Allotee or Tribe Name

APPLICATION FOR PERMIT TO	DRILL	OR REENTER!	10	o. If maian, Anotee of Prioc	, ivaine	
a. Type of work: DRILL REENTER				7. If Unit or CA Agreement, Name and No.		
. Type of Well: Oil Well Gas Well Other Single Zone Multiple Zone			8. Lease Name and Well No. Highlands 14 Federal #1			
2. Name of Operator  Parallel Petroleum Corporation 230 387				9. API Well No. 30-015-32341		
. Address 1004 North Big Spring, Suite 400 Midland, Texas  3b. Phone No. (include area code) 432/684-3727				10. Field and Pool, or Exploratory Wolfcamp		
4. Location of Well (Report location clearly and in accordance with	any State re	equirements.*)		11. Sec., T. R. M. or Blk. and S	urvey or Area	
At surface 1980' FNL and 2000' FWL, 14-19 At proposed prod. zone ROSWELL CONTR		WATER BASIN		14-19S-21E		
14. Distance in miles and direction from nearest town or post office*				12. County or Parish	13. State	
9 miles south of Hope, New Mexico				Eddy	NM	
15. Distance from proposed* location to nearest property or lease line, ft.	16. N	o. of acres in lease	•	g Unit dedicated to this well		
(Also to nearest drig. unit line, if any) 19800'		2,560.00		320		
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.  3500' south	l l	, , , , , , , , , , , , , , , , , , , ,		M/BIA Bond No. on file (B000265		
21. Elevations (Show whether DF, KDB, RT, GL, etc.) GL 4244'			t*	23. Estimated duration 20 days		
	24.	Attachments				
The following, completed in accordance with the requirements of Ons	shore Oil an	d Gas Order No.1, shall be at	tached to the	s form:		
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National Forest Syste SUPO shall be filed with the appropriate Forest Service Office).</li> </ol>	em Lands,	ltem 20 above). the 5. Operator certific	ation	ns unless covered by an existing	,	
25. Signature Clebra Kuram		Name (Printed/Typed) Date			17-06	
Title Drilling Engineer, Parallel Petroleum Corpora						
Approved by (Signatures Don Peterson		Name (Printed/Typed) S/ Don F	Peterso	Date No	OV 14 <b>200</b> 0	
ACTINGFIELD MANAGER		Office CARLSBAD	FIEL	D OFFICE		
Application approval does not warrant or certify that the applicant h conduct operations thereon.  Conditions of approval, if any, are attached.	olds legal	or equitable title to those righ	ts in the sub	ject lease which would entitle th	e applicant to	
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a States any false, fictitious or fraudulent statements or representations			villfully to n	ake to any department or agenc	y of the United	

\*(Instructions on page 2)

APPROVAL FOR 1 YEAR

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					State of Ne	w Mexico	~ (1920 213)	For	.m. C-103
P.O. Box 1980, Hobbs, I DISTRICT II P.O. Drawer DD, Artenio	a, NW 88211-	-0719		CON	SERVATI P.O. Box 2	ON DIVISOR ON BIVISOR ON DIVISOR ON BIVISOR	ION Juliana	Revised Februar to Appropriate Dist State Losso Wee Lease	rict Office - 4 Copies
1000 Rio Brazos Rd. DISTRICT IV P.O. BOX 2088, SANTA						AGE DEDICATE	```````````ESIA	AMENDED	REPORT
30-015	umber - 323			Pool Code	(4)	ildati i	Boal Name	, C	
Property Co			114	HIGH	Property Nam HLANDS 14	•	7011 CA 19	Well Num	ber
OGRID No.			Operator Nan	COMPANY	Elevation 4244'				
<b></b>		<del>*, *,</del> .			Surface Loc	àtion		<del></del>	<del></del>
UL or lot No.	Section 14	Township 19-S	Range 21-E	Lot Idn	Feet from the 1980	North/South line NORTH	Feet from the 2000	East/West line WEST	County EDDY
			Bottom	Hole Lo	cation If Diffe	erent From Sur	face		
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres	Joint o	r Infill Co	nsolidation (	Code O	rder No.		<u></u>		
NO ALLO	WABLE W					UNTIL ALL INTER APPROVED BY		EN CONSOLIDA	ATED
	2006	4243.9' 4231.0'	4230.9'				Signature  Signature  Signature  Larry  Printed Name  Lester  Title  Date  SURVEYO  I hereby certify on this plat we actual surveys supervison, and correct to the  DECEN  Date Surveyor  Signature & Professional  Certificate N	K. Stride  K. Stride  District  /20/2002  R CERTIFICAT  that the well local us plotted from field made by me or d that the same is best of my belief  MBER 12, 200  3 1, 1911  Seal of Seal of	Mgr.  FION  FION  FION  FION  Aware  FION  Aware  FION  FION

# 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 103570

Legal Description of Land:

Highlands 14 Federal #1

1980' FNL AND 2000' FWL, SEC 14, 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

 $\frac{10-17-2006}{\text{Date}}$ 

Name: Deane Durham

Title: Engineer

# **ATTACHMENT TO FORM 3160-3**

Parallel Petroleum Company Highlands "14" Federal #1Y Eddy, New Mexico API Number 30-015-32341

#### **Re-entry Procedure**

# **Objective:**

Re-enter Plugged and Abandoned wellbore to monitor fracture treatment in Ammo Box well.

This well will not produce any oil or gas and the well will be plugged and abandoned to BLM and NMOCD requirements upon completion of monitoring activities.

#### Well Location:

1980' FNL & 2000' FWL, Section 14, T-19-S, R-21-E

#### Well Data:

Surface Casing:

13 3/8", 48 #/ft set in 17 ½" hole at 396' and cemented to surface

Intermediate Casing: 9 5/8", 36 #/ft set in 12 ¼"hole at 1395' and cemented to surface

Production Casing:

5 ½", 17 #/ft set in 8 3/4" hole at 7950'. String was cut and pulled

from 4800' and has cement plug at 4800'.

### **Plugging Data:**

Plug	<u>Sacks</u>	Top	<b>Bottom</b>
#1	60	Surf	60'
#2	100	146'	450'
#3	100	1139'	1445'
#4	100	2550'	2700'
#5	76	4737'	4851'
#6	100	5444'	6250'
#7	50	6250'	

CIBP set at 6700', capped with 35' of cement.

# General Re-entry Procedure:

- 1. Dig out to 9 5/8" casing. Weld onto 9 5/8" casing with 9 5/8" x 4'- 5'nipple and install 11" 3M casing head.
- 2. Prepare surface location, set anchors, and MI steel circulation pits.
- 3. MIRU Key Energy pulling unit and Weatherford reverse unit with power swivel.
- 4. NU and test BOPE to 2000 psi.
- 5. PU 8 3/4" bit, DC's and 2 7/8" work string. Drill plug #'s 1, 2 & 3 with fresh water.
- 6. Mix mud, displace hole and drill plug # 4. Continue in hole, tagging plug #5 at 4737'.
- 7. Circulate clean and POOH. LD bit & DC's.

- 8. Install 4 ½" casing rams. Inspect, PU, and RIH w/~4737' of 4 ½" 11.6# N-80 LTC.
- 9. RU BJ and cement per recommendation for planned TOC at 4000'.
- 10. PU bit, scraper and work string.
- 11. Make bit & scraper run to PBTD. Circ clean w/ fresh water.
- 12. RU Enertech Wireline. RIH and land Pinnacle monitoring tools. RD Enertech
- 13. Monitor Ammo Box fracture stimulation.
- 14. RU Enertech Wireline and pull Pinnacle tools.
- 15. Cut 4 ½" casing at free point to recover +/- 4000' of casing, POOH LD.
- 16. Spot 130' cement plug in 8 34" open hole from ~2550 to 2700' w/ 100 sx Class 'C'.
- 17. Spot cement plug from 50' above 9 5/8" shoe to 50' below shoe inside 8 3/4" open hole w/ EOT at 1445' w/ 100 sx class 'C'. WOC & tag plug.
- 18. Spot cement plug inside 9 5/8" csg at 13 3/8" shoe from 146'to 450' w/ 100 sx Class 'C'.
- 19. Set 60' surface plug inside 9 5/8" casing w/ 60 sx Class 'C'.
- 20. Cut off casing minimum 3' BGL. Install dry hole marker.

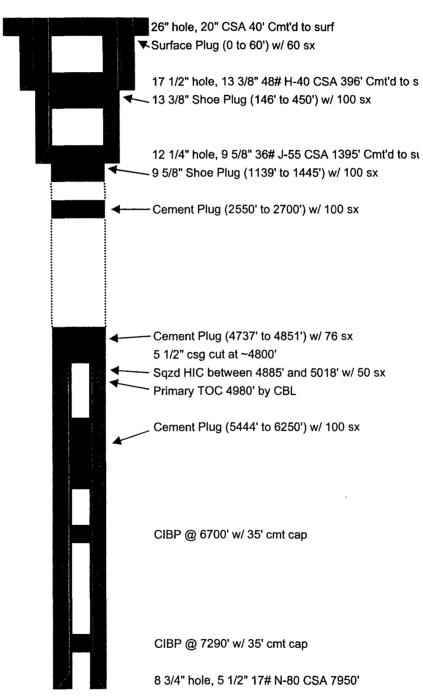
#### **Supplies & Services**

Supervision	Parallel	Hobbs	Donnie Hill	432-934-7164
Location	TBD			
Anchors	TBD			
Well Heads	J-W	Midland	Wesley Key	432-687-0515
Pulling Unit	Key Energy	Artesia	David Alvarado	505-746-9663
Reverse Unit	Weatherford	Hobbs	Joe Balog	505-392-2626
Surface Rentals	Weatherford	"	"	66
Subsurface Rentals	Weatherford	"	"	66
Mud	Baroid		Billy Sumptor	505-390-5462
H2S Safety	Callaway	Artesia	•	505-746-2847
Casing & Tubing	Tarpon	Midland	Alan Peters	432-683-8777
Casing Crews	Mike Byrd	Hobbs		505-390-6711
Float Equipment	Weatherford	Artesia		505-746-8882
Pipe Inspection	Tuboscope	Hobbs		505-397-3213
Cementing	BJ	Artesia		505-746-3140
Wireline Services	Enertech	Artesia	Wally Hill	505-746-9227
Frac Monitoring	Pinnacle	Midland	·	432-682-3685

# Current

Well Numbe1Y		Formation Tops		Spud	6/9/2002
Location	1980' FNL and 2000' FWL	Glorieta	1400	API	30-015-32341
	Sec 14, T19S - R21E	Tubb	2750	Elev	4244
County	Eddy, NM	Drinkard	2890	RKB	4261
Operator	Kukui	Abo Shale	3390	APD	6/10/2002
Field	Huapache Basin (Wildcat)	Abo Dolomite	3530		
NM O&G Ls #NM-103570		Wolfcamp	4480		

Note: Original well #1 was J&A at 861'. Skidded 20' east to drill #1Y



# SURFACE AND OPERATIONS PLAN FOR REENTY FOR MOINTIORING PURPUSES PARALLEL PETROLEUM CORPORATION HIGHLANDS 14 FEDERAL #1Y 1980' FNL AND 2000' FWL, SEC 14, T19S, R21E EDDY COUNTY, NEW MEXICO

# **LOCATED:**

9 miles South of Hope, New Mexico, Located on the same pad as the proposed Strong Box Federal #1

#### **OIL & GAS LEASE:**

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:

Not Applicable - well to be used to seismically monitor well stimulation of the Jewelry Box Federal #1 and Ammo Box Federal #1

# **HIGHLANDS 14 FEDERAL #1Y**

#### Page 2

#### **EXHIBITS:**

- A. Area Road Map
- B. Location and Access Map
- C. Topographic Map
- D. Vicinity Map
- E. Area Production Map
- F. Topographic & Location Verification Map
- G. Well Location & Acreage Dedication Map (NMOCD Form C-102)
- H. Blow Out Preventer (BOP) Schematic
- I. Choke Manifold Schematic

# 1. <u>EXISTING ROADS</u>

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

#### 2. ACCESS ROADS

# A. Length and Width

The access road constructed when the well was drilled will be utilized for the well and is shown on Exhibit C. The access road will come off County Road 20 and go east on 1653 to the site. A 75' wide turn in will be constructed onto the access road at County Road 20.

#### B. Surface Material

The road and location will be bladed and no surfacing material will be used.

#### C. Maximum Grade

Less than five percent.

# D. Turnouts

No turnouts will be constructed on this section of the access road.

# E. <u>Drainage Design</u>

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

# **HIGHLANDS 14 FEDERAL #1Y**

#### Page 3

#### 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". The well will share a drilling pad and reserve pit with the Strong Box Federal #1

# 4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

No production facilities will be used at this site as it is for temporary monitoring efforts only and will be plugged.

# 5. LOCATION AND TYPE OF WATER SUPPLY

Water will be trucked to the site from a commercial source.

#### 6. METHODS OF HANDLING WASTE DISPOSAL

- A. Drilling fluids will be collected in steel pits and taken to commercial disposal facilities upon completion of activities.
- B. Water produced during tests will be disposed of at a commercial disposal facility.
- 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 monitoring activities.
- F. No reserve pits will be constructed at the site as steel pits and or frac tanks will be used.

# HIGHLANDS 14 FEDERAL #1Y Page 4

# 7. ANCILLARY FACILITIES

None required.

## 8. WELL SITE LAYOUT

The area to be utilized for the re-entry will be smaller than the original drilling location. No pits will be constructed and the exact equipment layout has not yet been determined.

# 9. PLANS FOR RESTORATION OF THE SURFACE

- A. After completion of monitoring operations, all equipment will be removed from the site.
- B. The well will be plugged and abandoned to BLM and NMOCD specifications and the site restored to current condition.

# 10. OTHER INFORMATION

#### A. Topography

The project is located on open, rolling ridge slopes, with west/northwest exposure. The regional drainage of the site being to the south and east toward Gardner Draw.

#### 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

Gardner Draw, an intermittent stream which flows west to east, is located ½ mile south of the site. Drainage from this site will eventually flow into Gardener Draw. 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 miles northeast of the proposed well site

# HIGHLANDS 14 FEDERAL #1Y Page 5

- F. <u>Archaeological, Historical, and Cultural Sites</u>
  Previous archaeological clearance was secured by the original operator well the well was drilled in 2001 by Kukui Operating Company.
- G. <u>Land Use</u> Grazing
- H. <u>Surface Ownership</u> 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

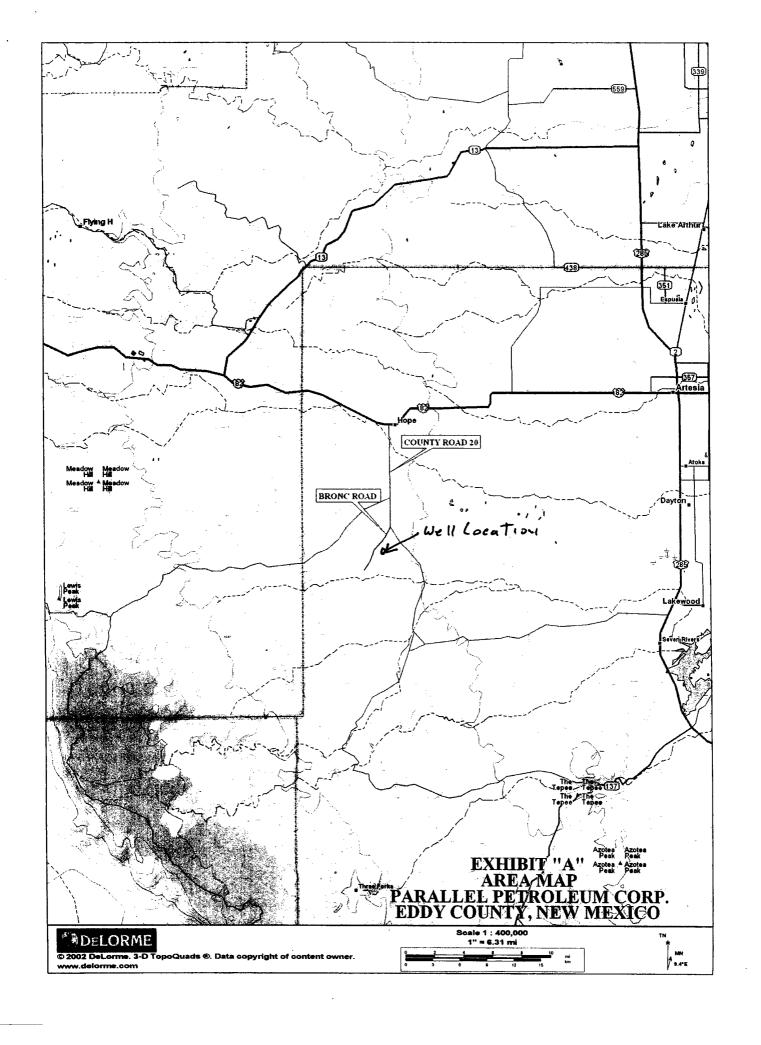
# 12. <u>CERTIFICATION</u>

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.

Data

Name: Deane Durham

Title: Engineer



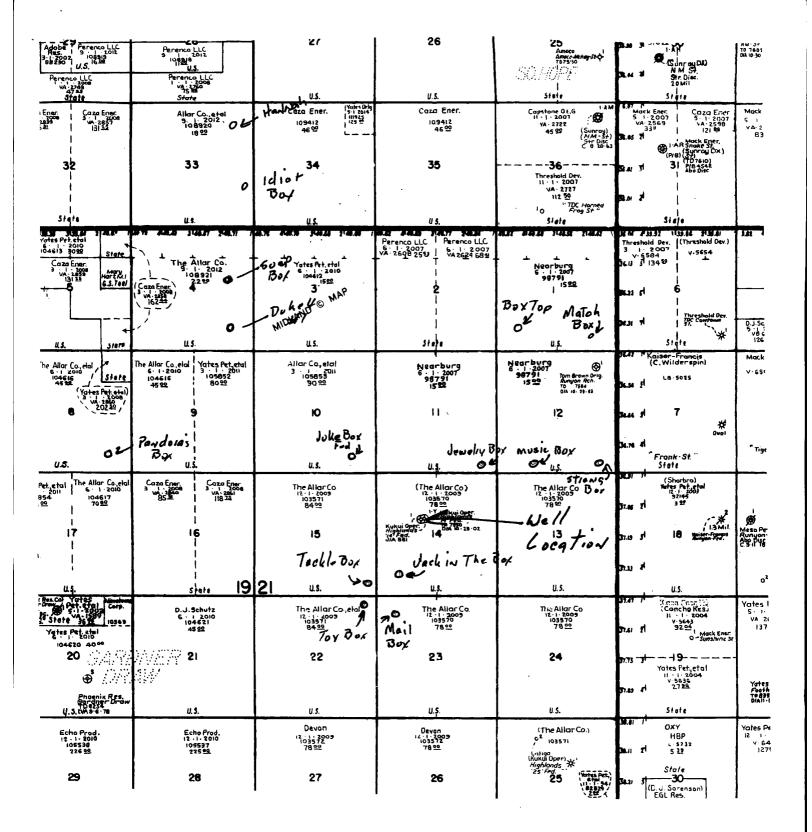


Exhibit "E"

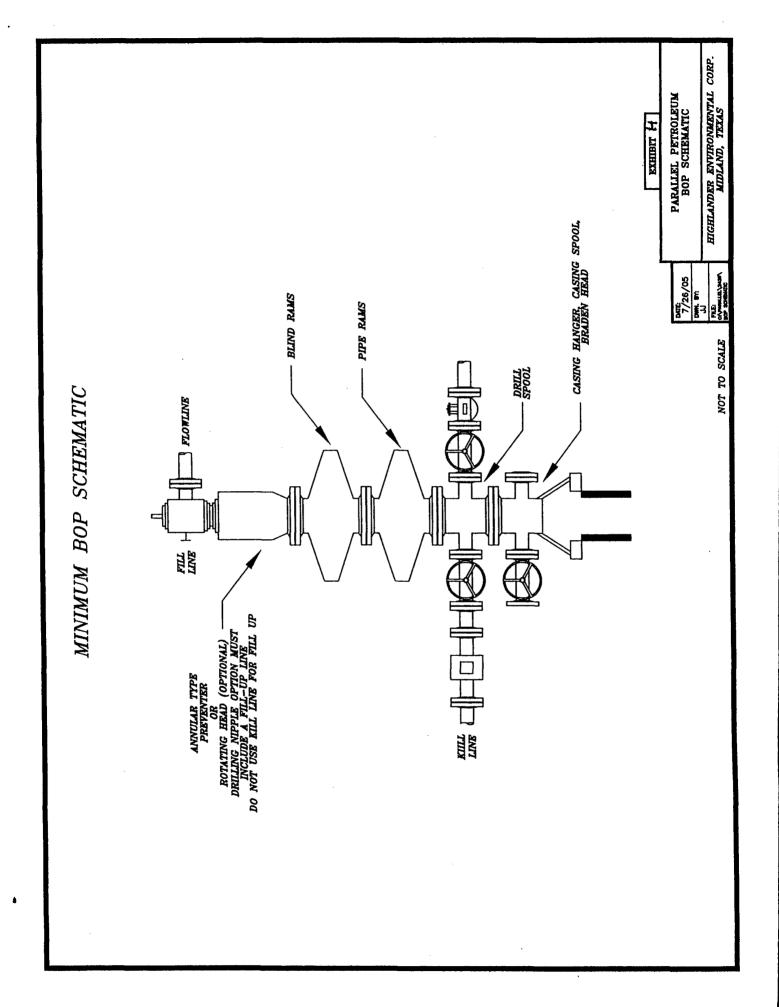
AREA PRODUCTION MAP

PARALLEL PETROLEUM CORPORATION

HIGHLANDS 14 FEDERAL #1Y

SHL: 1980' FNL AND 2000' FWL, SEC 14, T19S, R21E

**EDDY COUNTY, NEW MEXICO** 



# HIGHLANDER ENVIRONMENTAL CORP. MIDIAND, TEXAS PARALLEL PETROLEUM CHOKE MANIFOLD PANIC LINE TO PIT 3" NOMINAL EXHIBIT I 2" NOMINAL 3 2" NOMINAL CHOKE ISOLATION VALVE REQUIRED FOR MMS OPTIONAL FOR NON MMS APPLICATIONS CHOKE ISOLATION VALVE REQUIRED FOR MMS OPTIONAL FOR NON MMS APPLICATIONS DATE: 8/17/05 DIRL, ST: JJ FLE: CONSEMBLANSORN GOOD: MARRIAGO NOT TO SCALE CHOKE MANIFOLD 3M SERVICE MANUAL ADJUSTABLE CHOKE (OR POSITIVE) MANUAL ADJUSTABLE CHOKE 3" NOMINAL CHOKE HCR (OPTIONAL) MANUAL VALVE OK BOP



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@plll.com.

Sincerely.

A. Deane Durham Senior Engineer

#### CONDITIONS OF APPROVAL - DRILLING

Well Name & No. Operator's Name:

Highlands 14 Federal # 1 Parallel Petroleum Corp

Location:

1980' FNL, 2000' FWL, SEC 14, T19S, R21E, Eddy County, NM

Lease:

NM-103570

#### I. DRILLING OPERATIONS REQUIREMENTS:

- 1. The Bureau of Land Management (BLM) is to be notified at the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:
- A. Spudding
- B. Cementing casing: 4 1/2 inch
- C. BOP tests
- 2. A Hydrogen Sulfide (H2S) Drilling Plan should be activated prior to drilling into the <u>N/A</u> Formation. A copy of the plan shall be posted at the drilling site.
- 3 Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
- 4. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing ( size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.
- 5. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.
- 6. A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.
- 7. 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.

#### II. CASING:

- 1. A CIT will be run on the existing 9 5/8 inch casing before drilling out the existing shoe plug for this well.
- 2. The minimum required fill of cement behind the <u>4-1/2</u> inch <u>TESTING</u> casing is <u>cement TOP shall BE brought up to 4000 feet.</u>
- 3. This casing and cement program is approved for this well being used as a monitor well ONLY and for a SHORT TIME PERIOD.
- 4. This well must be PLUGGED AND ABANDONED WITHIN 90 DAYS OF COMPLETION OF FRACTURE MONITORING OF THE OFFSET WELL.
- 5. Whenever a casing string is cemented in the R-111-P Potash Area, cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests.

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

- 1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 9 5/8 inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.
- 2. Minimum working pressure of the blowout preventer and related equipment (BOPE) is 2000 psi.
- 3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.
- A variance to test the to the reduced pressure of psi with the rig pumps is approved.
- The tests shall be done by an independent service company.
- The results of the test shall be reported to the appropriate BLM office.
- Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
- Testing must be done in a safe workman-like manner. Hard line connections shall be required.

#### IV. MUD

1. Minimum mud weight for this well is 9.0 ppg.

#### V. PLUGGING AND ABANDONMENT

- 1. This Procedure is approved base on this well being re-entered as a temporary monitor well only, to be plugged and abandoned within 90 days of completion of the monitoring of the frac job on the offset well.
- 2. The abandonment procedure is modified as follows:
  - a. A 25 sack cement plug will be set @ 4450 feet.
  - b. After cutting off the 4 ½ inch casing, a cement plug will be set inside and outside of this casing from 50 feet below the stub to 50 feet above the stub.
  - c. All plugs including the surface plug must be at least 25 sacks of cement and 100 feet, including the surface plug.
  - d. The plugs @ 4450' and the casing shoes will be tagged.

Engineers can be reached at 505-706-2779 for any variances that might be necessary.

F Wright 11/07/06