12-802

Form 3160-3
(March 2012)

HOBBS OCD
SEP 17 2012
RECEIVED

FORM APPROVED
OMB No 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No: NMLC - 0065710

6 If Indian, Allotee or Tribe Name:

1a. Type of work. ☑ DRILL ☐ REENTER

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: AMOCO "21" FEDERAL #1H 39447

2 Name of Operator: Occidental Permian Limited Partnership 157984?

9 API Well No: 30-025-40753

3a Address: P.O. BOX 4294, HOUSTON, TX 77210

3b Phone No (include area code): 713-513-6640

10 Field and Pool, or Exploratory: Lusk Bone Spring East (41442)

4 Location of Well (Report location clearly and in accordance with any State requirements *)

At surface: 470' FNL & 660' FEL

At proposed prod zone: 330' FSL & 660' FEL Unit A

11 Sec, T R M or Blk and Survey or Area: A, SEC 21; T19S, R32E

14 Distance in miles and direction from nearest town or post office*: 20 miles Northwest of Carlsbad, NM

12 County or Parish: LEA

13 State: NM

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drlg unit line, if any)	16 No. of acres in lease	17 Spacing Unit dedicated to this well
470'	560	160
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	**19 Proposed Depth**	**20 BLM/BIA Bond No. on file**
1500'	13591' MD / 9414' TVD	NM2797
21 Elevations (Show whether DF, KDB, RT, GL, etc)	**22 Approximate date work will start***	**23. Estimated duration**
3603.7'	08/06/2012	10 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No 1, must 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 must 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 BLM.

25 Signature	Name (Printed/Typed)	Date
Jennifer Duarte	Jennifer Duarte (jennifer_duarte@oxy.com)	05/30/2012

Title: Regulatory Analyst

Approved by (Signature)	Name (Printed/Typed)	Date
/s/ Don Peterson		SEP 13 2012
Title FIELD MANAGER	**Office** CARLSBAD FIELD OFFICE	

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

Title 18 U S C Section 1001 and Title 43 U S C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

(Continued on page 2)

*(Instructions on page 2)

Kz 9/19/12 Capitan Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached
SEP 20 2012

Occidental Permian Ltd.
Amoco 21 Federal 1H
APD Data

Operator Name/Number:	Occidental Permian Limited Partnership	
Lease Name/Number:	Amoco 21 Federal #1H	Federal Lease No. NMLC065710
Pool Name/Number:	Lusk; Bone Spring East (41442)	
Surface Location:	470 FNL 660 FEL NENE (A) Sec 21 T19S R32E	
Bottom Hole Location:	330 FSL 660 FEL SESE (P) Sec 21 T19S R32E	

Proposed TD:	9414' TVD	13591' TMD		Elevation:	3603,7' GR
SL - Lat: 32.6517485	Long: -103.7642785	X= 675146.0	Y= 601286.6		NAD - 1927
BH - Lat: 32.6394215	Long: -103.7642540	X= 675177.6	Y= 596802.1		NAD - 1927

1. GEOLOGIC NAME OF SURFACE FORMATION
   a. Permian

2. ESTIMATED TOPS OF GEOLOGICAL MARKERS & DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS

Geological Marker	Depth	Type
Rustler	929'	---
Top Salt	1114'	---
Tansill (Base Salt - ~~Top of Capitan~~ Reef)	2529'	---
T. Yates	2699'	---
T Seven Rivers	3059'	---
T. Queen (Base of Capitan Reef)	3974'	---
Delaware	4774'	Oil
Bone Spring	7299'	Oil
1st Bone Spring	8484'	Oil
2nd Bone Spring	8769'	Oil
2nd Bone Spring Sand	9414'	Oil

should be with mud section

A. Appropriately weighted mud will be used to isolate potential gas, oil, and water zones until such time as casing can be cemented into place for zonal isolation.

GREATEST PROJECTED TD 13591' MD / 9414' TVD **OBJECTIVE** 2nd Bone Spring

3. CASING PROGRAM

Hole Size	Interval	OD Csg	Weight	Collar	Grade	Condition	Collapse Design Factor	Burst Design Factor	Tension Design Factor
26"	960'	20"	94	ST&C	J55	New	1.56	6 33	8.69
				Hole filled with 8 6# Mud			520#	2110#	784#
17-1/2"	2650'	13-3/8"	61	ST&C	J-55	New	1 35	2 71	3 68
	4500			Hole filled with 10.0# Mud			1540#	3090#	595#
12-1/4"	~~4675~~'	9-5/8"	40	LT&C	J-55	New	2 25	3 46	4.91
				Hole filled with 8.8# Mud			2570#	3950#	520#
8-3/4"	13591' M	5-1/2"	17	LT&C	L-80	New	1.72	2 11	1 51
DVT @ 8000' - POST @ 4125'				Hole filled with 9 2# Mud			6290#	7740#	348#

10/0

See COA

Collapse and burst loads calculated using Stress Check with actual anticipated loads

4. CEMENT PROGRAM:

20" Surface — Circulate cement to surface w/ 1870sx Premium Plus (PP) cmt w/ 4% Bentonite + .125#/sx Poly-E-Flake + 2% CaCl2, 13.5ppg 1.75 yield 1069# 24hr CS 165% Excess followed by 400sx PP cmt w/ 2% CaCl2, 14.8ppg 1 35 yield 1827# 24hr CS 165% Excess

13-3/8" Intermediate — Circulate cement to sfce w/ 1570sx HES light PP cmt w/ 5% Salt + .125#/sx Poly-E-Flake+5#/sx Kol Seal, 12 9ppg 1 90 yield 760# 24hr CS 105% Excess followed by 400sx PP cmt w/ 1% CaCl2, 14.8ppg 1 34 yield 2032# 24hr CS 105% Excess

9-5/8" Intermediate — Circulate cement to surface w/ 920sx HES light PP cmt w/ 5% Salt + .125#/sx Poly-E-Flake+ 5#/sx Kol Seal, 12 9ppg 1.91 yield 625# 24hr CS 150% Excess followed by 300sx PP cmt w/ 2% CaCl2, 14 8ppg 1 35 yield 1746# 24hr CS 150% Excess

5-1/2" Production — Cement 1st stage w/ 1610sx Super H w/ 5% Halad-344 + 4% CFR-3 + 3#/sx Kol Seal + 4% HR-601 + 125#/sx Poly-E-Flake + 1 #/sx Salt + 13.2ppg 1 63 yield 1275# 24hr CS 85% Excess, Calc TOC-8000' DV tool – 8000'
Cement 2nd stage w/ 960sx HES light PP cmt w/ 5#/sx Salt + 5#/sx Kol Seal + 0 125#/sx Poly-E-Flake + 0 4% HR-601, 12.4ppg 2 10 yield 511# 24hr CS 125% Excess followed by 100sx PP cmt w/ 0 15% HR-601, 14 8ppg 1.34 yield 1303# 24hr CS 125% Excess, Calc TOC-4125' POST tool – 4126'
Cement 3rd stage w/ 530sx HES Light PP cmt w/ 3#/sx Salt, 12 4ppg 2 05 yield 500# 24hr CS 35% Excess followed by 100sx PP cmt w/ 2% CaCl2, 14 8ppg 1 35 yield 2100# 24hr CS 85% Excess, Circ to Surface

See COA

5. **DIRECTIONAL PLAN**
Please see attached directional plan

6. **PRESSURE CONTROL EQUIPMENT**
Surface: 0 – 960' None.
Intermediate1: 0 - 2650' First intermediate hole will be drilled with a 2M Annular Diverter system
Intermediate2: 0 - 4075' Second intermediate hole will be drilled with a 13-5/8" 10M three ram stack w/ 5M annular preventer, & 10M Choke Manifold
Production: 0 – 13591' Production hole will be drilled with a 13-5/8" 10M two ram stack w/ 5M annular preventer, & 10M Choke Manifold

a All BOP's and associated equipment will be tested in accordance with Onshore Order #2 (250/5000 psi on rams for 10 minutes each and 250/3500 for 10 minutes for annular preventer, equal to 70% of working pressure) with a third party BOP testing service before drilling out the 13-3/8" casing shoe Wellhead pressure rating will support this test and 13-3/8" casing will be protected from high pressure. Since the wellhead system is a multibowl design, this initial test will cover the requirements prior to drilling out the 9-5/8" casing shoe.

b Pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole These functional tests will be documented on the daily driller's log A 2" kill line and 3" choke line will be accommodated on the drilling spool below the ram-type BOP. Other accessory BOP equipment will include a Kelly cock, floor safety valve, choke lines, and choke manifold having a 5000 psi WP rating Oxy requests that the system be tested at 5,000 psi WP rating Annular See Diagram

c Oxy requests ~~a variance~~ to use a 2M Diverter on the 20" surface casing

d. Oxy requests a variance to connect the BOP choke outlet to the choke manifold using a co-flex hose made by Contitech Rubber Industrial KFT It is a 3" ID x 35' flexible hose rated to 10,000 psi working pressure It has been tested to 15,000 psi and is built to API Spec 16C Once the flex line is installed it will be tied down with safety clamps Please see attached certifications

e See attached Diverter, BOP & Choke manifold diagrams

7. **MUD PROGRAM:**

Depth	Mud Wt ppg	Vis Sec	Fluid Loss	Type System
0 – 960'	8 4 – 8 9	32 – 34	NC	Fresh Water /Spud Mud
960' – 2650'	9.8 – 10 0	28 – 29	NC	Brine Water
2650' – 4075'	8.6 – 8.8	28- 29	NC	Fresh Water
4075' – 8000'	8 8 – 9 0	28- 29	NC	Brine Wate/Duo Vis
8000' - TD	9.0 – 9.2	32 - 40	8 - 15	Duo Vis

Remarks. Pump high viscosity sweeps as needed for hole cleaning The mud system will be monitored visually/manually as well as with an electronic PVT The necessary mud products for additional weight and fluid loss control will be on location at all times

8. **AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT**

a. A Kelly cock will be in the drill string at all times

b. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor unobstructed and readily accessible at all times

c. Hydrogen Sulfide detection equipment will be in operation after drilling out the surface casing shoe until the production casing is cemented Breathing equipment will be on location upon drilling the surface casing shoe until total depth is reached. **If Hydrogen Sulfide is encountered , measured amounts and formations will be reported to the BLM**

9. **LOGGING / CORING AND TESTING PROGRAM:**

A Mud Logger From Intermediate casing shoe to TD

B DST's None

C Open Hole Logs as follows GR-NEU-DEN-RES from KOP to Int Casing GR-NEU to surface. GR-MWD from KOP to TD

See COA

10. POTENTIAL HAZARDS:

A H2S detection equipment will be in operation after drilling out the surface casing shoe until the production casing has been cemented. Breathing equipment will be on location from drilling out the surface shoe until production casing is cemented If H2S is encountered the operator will comply with Onshore Order #6

B The bottomhole pressure is anticipated to be between 3500 psi and 3700 psi, with a max anticipated temperature of 170deg F

C No abnormal temperatures or pressures are anticipated **The highest anticipated pressure gradient is 0.48 psi/ft or 3700 psi**. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely

11. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS

Road and location construction will begin after the BLM has approved the APD Anticipated spud date will be as soon as possible after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 32 days. If production casing is run, then an additional 30 days will be needed to complete the well and construct surface facilities and/or lay flow lines in order to place well on production.

12. COMPANY PERSONNEL:

Name	Title	Office Phone	Mobile Phone
Carlos Mercado	Drilling Engineer	713-366-5418	281-455-3481
Luis Tarazona	Drilling Engineer Supervisor	713-366-5771	713-628-9526
Roger Allen	Drilling Superintendent	713- 215-7617	281-682-3919
Douglas Chester	Drilling Manager	713- 366-5194	713-918-9124