

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

FORM APPROVED

OMB No. 1004-0136

Expires November 30, 2000

2001 AUG -3 PM

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		15. Lease Designation and Serial No. NMNM-99720	
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator Synergy Operating, LLC (agent for Bois d' Arc Offshore, Inc.)		7. If Unit or CA, Agreement, Name and No. 28995	
3a. Address PO Box 5513 Farmington, NM 87499		8. Lease Name and Well No. Bois d' Arc Encino 15 # 1	
3b. Phone Number (505) 325-5449		9. APD Well No. 30-031-2100 8	
4. Location of Well (Footage, Sec. T, R., M, or Survey Description) At surface: Unit Letter A, 250' FNL, 920' FEL, Sec 15, T20N-R05W At proposed prod. Zone: Same		10. Field and Pool, or Exploratory WLG, LONGWISA, Dakota	
14. Distance in miles and direction from nearest town or post office* 1 Mile North of Ojo Encino Village		12. County or Parish, State McKinley New Mexico	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. Unit line, if any) 250 Feet from North Line		16. No of Acres in lease 1090 Acres	
18. Distance from proposed* location to nearest property or lease line, ft. 920 Feet from East Line		17. Spacing Unit dedicated to this well 160 Acres	
21. Elevation (Show whether DF, KDB, RT, GL, etc.) 6725' Ground Level		20. BLM/BIA Bond No. on file NM-2559	
22. Approximate date work will start* November 1, 2001		23. Estimated duration 60 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:

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

Size of Hole	Grade, Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
12-1/4"	8-5/8" K-55	24 #	150' 220	210 sxs, 245 ft3
7-7/8"	5-1/2" K-55	15.5#	5250'	935 sxs, 2319 ft3

This permit is subject to procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4.

SEE ATTACHED APD INFORMATION

"GENERAL REQUIREMENTS"

Latitude: 35 Deg, 58 Min, 13 Sec N
Longitude: 107 deg, 20 min, 51 Sec W

25. Signature 	Name(Printed/Typed) Thomas E. Mullins	Date 8-2-2001
Approved by (Signature) 	Name(Printed/Typed) AEM Mullins	Date 10/29/01

Application approval does not warrant or certify 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.

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 reverse)

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, NM 87504-2088DISTRICT IV
PO Box 2088, Santa Fe, NM 87504-2088☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30031-21008	*Pool Code 97154	*Pool Name WC 20N5W15A, Dakota
*Property Code 28995	*Property Name ENCINO 15	*Well Number 1
*OGRD No. 163458	*Operator Name BOIS d' ARC Offshore, Inc.	*Elevation 6725

¹⁰ Surface Location

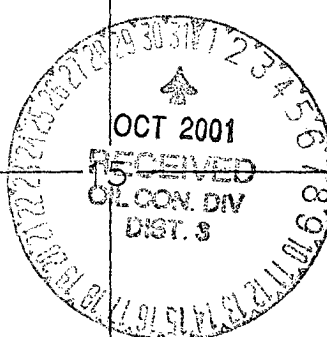
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	15	20-N	5-W		250	NORTH	920	EAST	MCKINLEY

¹¹ 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
¹² Dedicated Acres 160			¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No. NSL 4648, 9-28-1		

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

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QTR. CORNER FD. GLO BC 1936		N 89-57-21 W 2624.8'	250'	920'	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief Signature <u>Thomas E. Mullins</u> Printed Name <u>THOMAS E. MULLINS</u> Title <u>Engineering Manager</u> Date <u>8-2-2001</u>
LAT. 35°58'13" N LONG. 107°20'51" W		392'	1070'	SEC. CORNER FD. GLO BC 1936	
		N 00-01-00 E 2640' (GLO)			18 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 supervision, and that the same is true and correct to the best of my belief. Date of Survey <u>5-1-01</u> Signature and Seal of Professional Surveyor <u>Roy A. Rush</u> 8894 Certificate Number
		CALC'D CORNER CAP DESTROYED			
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NE/4 SEC. 15, T-20-N, R-5-W, N.M.P.M.

MCKINLEY COUNTY, NEW MEXICO

250' FNL 920' FEL

11

16 MI. TO N.

9

6773

6760

6742

WELL FLAG

6723

6729

3983

NEW ACCESS

16

15

14

Drill Hole

3982

5730'

6795

Water Tank

6715

Drill Hole

6800

3981

6800

Tanks

Drill Hole

6758

22

23

BM

6791

6834

Drill Hole

Ojo Encino

6795

3980

6800

BM

6849

Rock

6800

4855 (V NW)
(STAR LAKE)

28

27

26

3979

6800

6750

6800

ENCINO

MESA

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SYNERGY OPERATING, LLC (Bois d' Arc Offshore, LTD.)

WELL NAME: Bois d' Arc Encino 15 # 1

DRILLING PROGNOSIS

1. Location of Proposed Well: Unit A, 250' FNL & 920' FEL
Section 15, T20N, R05W
McKinley County, New Mexico

2. Unprepared Ground Elevation: @ 6725'

3. The geological name of the surface formation is Kirtland

4. Type of drilling tools will be Rotary

5. Proposed drilling depth is 5250'

6. The estimated tops of important geologic markers are as follows:

<u>Nacimiento -</u>	<u>La Ventana (Cliffhouse) -</u>	<u>1105'</u>
<u>Ojo Alamo -</u>	<u>Meneffe -</u>	<u>1690'</u>
<u>Kirtland -</u>	<u>Pt. Lookout -</u>	<u>2615'</u>
<u>Fruitland Coal- 325'</u>	<u>Mancos -</u>	<u>2915'</u>
<u>Pictured Cliffs - 335'</u>	<u>Greenhorn -</u>	<u>4565'</u>
<u>Lewis Shale -</u>	<u>Graneros -</u>	<u>4605'</u>
<u>Chacra -</u>	<u>Dakota -</u>	<u>4785'</u>

7. The estimated depths at which anticipated water, oil, gas or other mineral bearing formations are expected to be encountered are as follows:

<u>Oil and Gas Zones</u>	<u>Water Zones</u>	<u>Coal Zones</u>
Meneffe 1690'		
Pt. Lookout 2615'	Cliffhouse 1105'	Meneffe 1450'
Mancos 2915'		
Dakota 4785'		

8. The proposed casing program is as follows:

Surface String: 8-5/8", 24#, J/K-55 @ ~~150~~ * 220
Production String: 5-1/2", 15.5# J/K-55 @ 5250' (see details below)

* The surface casing will be set at a minimum of 150', but could be set deeper if required to maintain hole stability.

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9. Cement Program:

Surface String: 210 sacks of Class "B" cement or equivalent (1.18 ft³/sx yield, 15.6 ppg) with 3 percent CaCl in mix water and 1/4# sack celloflake. Volume is based upon 200% excess. A wooden wiper plug will be displaced within 20' of the shoe. This casing string will be cemented to surface.

Production String: **Lead Cement:** 331 sxs Class A cement. Cement to surface - 150% excess casing/hole annular volume w/ Type III cement + 0.25#/sx Cello-flake + 5#/sx LCM-1 + 8% bwoc Bentonite + 3% bwoc Potassium Chloride mixed at 12.2 ppg. (2.48 cf/sx yield = 1,381 cf)

Tail: 150 sxs Premium Lite High Strength FM + 0.25#/sx Cello-flake + 3% Potassium Chloride + 0.3% bwoc CD-32 + 0.7% bwoc Fl-52 mixed at 12.5 ppg. (2.02 cf/sx yield = 303 cf)

A Guide Shoe, and autofill float collar will be run 20' off of bottom.

Note: Synergy continues to work to improve the cement slurries on our wells. Any modifications to cement will be of equivalent total volume, but would have better mechanical properties than the cement we are currently using. Synergy may run a 2 stage cement job on the production casing if prior wells indicate cement may not reach surface.

Centralizer Program:

Surface: Total four (4) minimum - 10' above shoe and top of 2nd, 3rd, & 4th jts. If 20' surface casing joints are used, then ten (10) centralizers will be run, one at each collar.

Production: Total seven (7) - 10' above shoe and top of 1st, 2nd, 4th, 6th, 8th, & 10th jts. a cement basket will be run above the Pt. Lookout, with turbulators above and below it.

Turbulators: Total two (2) - one at 1st jt below Pt. Lookout and 1 jt above the Pt. Lookout..

10. A 3000# Blow-Out Preventer System will be used for this well, consisting of the following items:

- 2 Hydraulic Rams (Pipe & Blind) or Hydraulic and Annular with Blind Ram on Bottom.
- 1- Kill Line (2-inch minimum)
- 1- Kill Line Valve (2-inch minimum)
- 1 - Choke Line Valve
- 2 chokes (refer to diagram in Attachment) on Choke Manifold
- Upper kelly cock valve in open position with handle available

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Safety Valve (in open position) and subs to fit all drill strings in use (with handle available)
Pressure gauged choke manifold
2 inch minimum choke line
Fill-up line above the uppermost preventer

The BOP equipment will be pressure and function tested according to Onshore Order # 2 – III.A-1 with a 30% safety factor. Please see that attached diagram.

11. Drilling Mud Prognosis:

Depth	Type	Wt./ppg.	Vis.,	Fluid Loss	pH
0'-350'	FW gel/lime spud mud	8.4 – 8.7	30-50	NC	10
350' - TD	Low solids non-dispersed	8.4 - 9.0	30-40	<20 cc's	9.5-10

Sufficient material needed to maintain mud properties, control loss circulation, and absorbent materials to contain any unforeseen pressure control situations will be maintained at the wellsite during all drilling operations. A mud logging unit w/ gas detector as well as a mud pit level indicator will be used out from under surface to TD.

12. The testing, logging, and coring programs are as follows:

D.S.T.s or cores: No DST's or Cores are anticipated, rotary sidewall cores may be taken.

Logs: Mud logger out from under Surface to TD, Openhole Logs to include SP, Induction, Density, & Neutron. Additional logs may be run.

13. No Anticipated or abnormal pressures or temperatures should be encountered. No hydrogen sulfide is present or anticipated.

Estimated Bottomhole pressures: Dakota is - +/- 2,100 psi

Surface casing and BOPE equipment will be tested to 1500 psi prior to drilling of the shoe. 3000# BOPE equipment will be utilized during production hole drilling operations.

14. The anticipated starting date is sometime in the 4th Qtr 2001 with duration of drilling operations for approximately 10 days thereafter. Completion Operations should take 10 days. Production Equipment will be installed and the well production tested based upon completion results.

