

August 1999

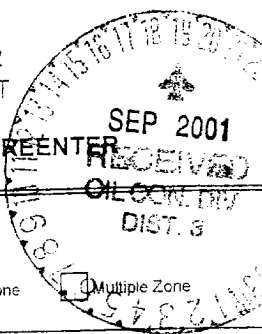
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED

OMB No. 1004-0136

Expires November 30, 2000

## APPLICATION FOR PERMIT TO DRILL OR REENTER



5. Lease Designation and Serial No.

NMNM-105533

6. Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement, Name and No.

8. Lease Name and Well No.

Bois d' Arc Divide 22 # 1

9. API Well No.

30-043-20952

10. Field and Pool, or Exploratory

WC 21N5W 22N; Mesa Verde

11. Sec., T., R., M., or Bk. and Survey or Area

N Sec 22, T-21-N, R-05-W

12. County or Parish

Sandoval

13. State

New Mexico

17. Spacing Unit dedicated to this well

160 Acres

20. BLM/BIA Bond No. on file

NM-2569

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:

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 SUPC shall 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 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'	210 sxs, 245 ft3
7-7/8"	5-1/2" K-55	15.5#	3810'	708 sxs, 1684 ft3

## SEE ATTACHED APD INFORMATION

Latitude: 36 Deg. 01 Min. 47 Sec N  
Longitude: 107 Deg. 21 Min. 14 Sec W

Signature	Name (Printed/Typed)	Date
<i>Thomas E. Mullins</i>	Thomas E. Mullins	8-2-2001
Title		
Engineering Manager		
Approved by (Signature)	Name (Printed/Typed)	Date
<i>S. W. Anderson</i>		SEP 17 2001
Title	Office	
Asst. Field Manager		

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 II  
P.O. Drawer DD, Artesia, N.M. 88211-0719

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

DISTRICT IV  
P.O. Box 2088, Santa Fe, NM 87504-2088

# OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, NM 87504-2088

Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number <b>30-043-20952</b>	<sup>2</sup> Pool Code <b>97132</b>	<sup>3</sup> Pool Name <b>WC 21N5W22N; Mesavente</b>
<sup>4</sup> Property Code <b>28893</b>	<sup>5</sup> Property Name <b>DIVIDE 22</b>	<sup>6</sup> Well Number <b>1</b>
<sup>7</sup> GRID No. <b>163458</b>	<sup>8</sup> Operator Name <b>BOIS d' ARC Offshore, Inc.</b>	<sup>9</sup> Elevation <b>7304</b>

### <sup>10</sup> 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	22	21-N	5-W		750	SOUTH	1650	WEST	SANDOVAL

### <sup>11</sup> 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

<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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

### <sup>17</sup> OPERATOR CERTIFICATION

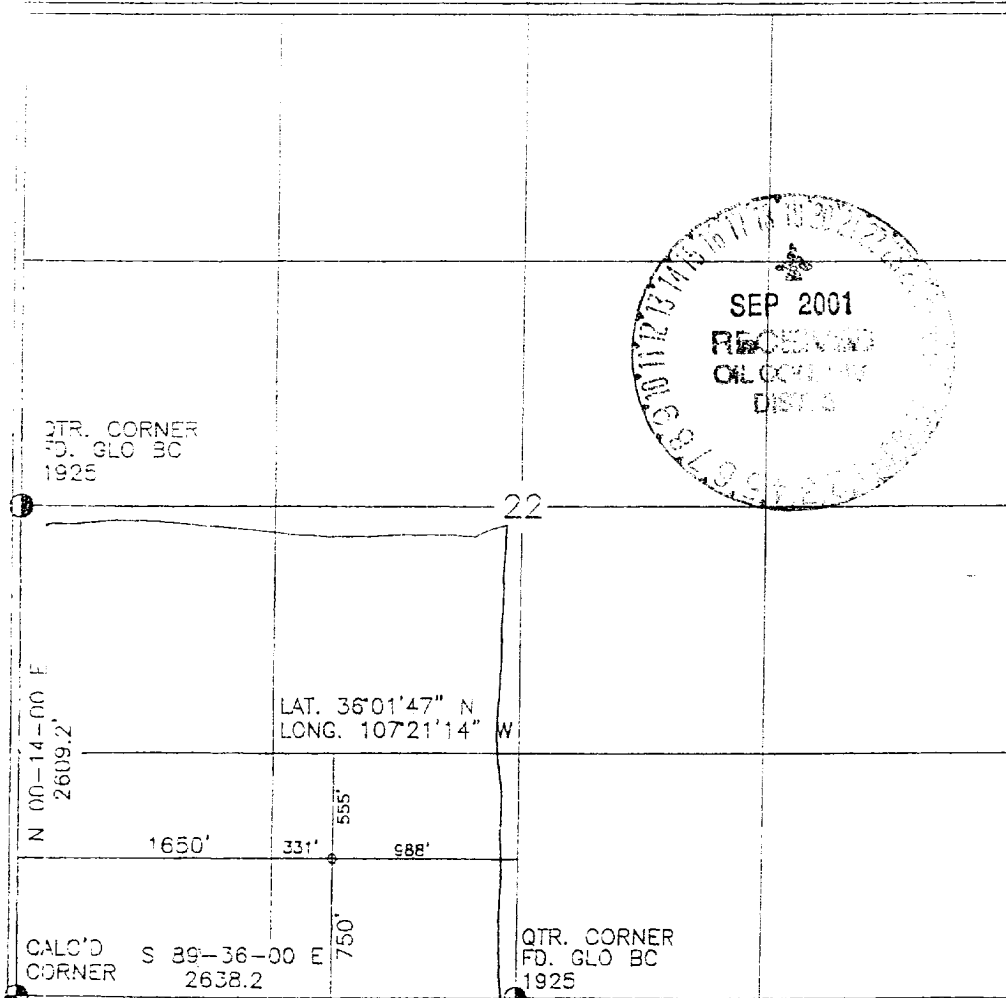
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

Signature  
**THOMAS E. MULLINS**  
Printed Name  
**ENGINEERING Manager**  
Title  
**B-2-2001**  
Date

### <sup>18</sup> 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  
**5-10-00**  
Signature and Seal of Professional Surveyor  
**ROY A. RUSH**  
8894  
Certificate Number

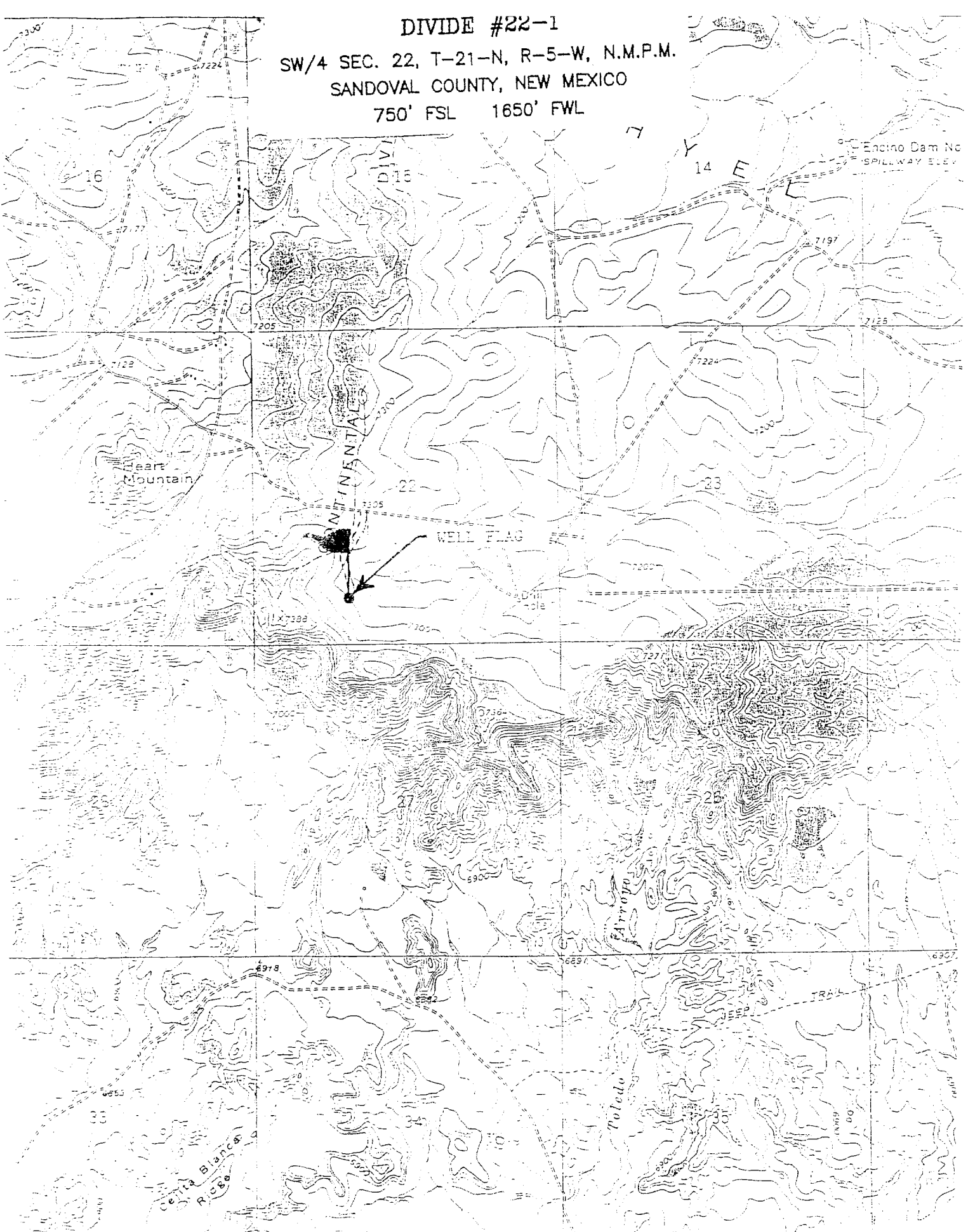


DIVIDE #22-1

SW/4 SEC. 22, T-21-N, R-5-W, N.M.P.M.

SANDOVAL COUNTY, NEW MEXICO

750' FSL 1650' FWL



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

**WELL NAME:** Bois d' Arc Divide 22 # 1

**DRILLING PROGNOSIS**

1. Location of Proposed Well: Unit N, 750' FSL & 1650' FWL  
Section 22, T21N, R05W
2. Unprepared Ground Elevation: @ 7304'
3. The geological name of the surface formation is Nacimiento.
4. Type of drilling tools will be Rotary.
5. Proposed drilling depth is 3810'.
6. The estimated tops of important geologic markers are as follows:

<u>Nacimiento -</u>	<u>Chacra - 1705'</u>
<u>Ojo Alamo -</u>	<u>La Ventana (Cliffhouse) - 2250'</u>
<u>Kirtland - 1245'</u>	<u>Meneffe - 2935'</u>
<u>Fruitland Coal- 1475'</u>	<u>Pt. Lookout - 3755'</u>
<u>Pictured Cliffs - 1485'</u>	<u>T. D. - 3810'</u>
<u>Lewis Shale - 1645'</u>	
7. The estimated depths at which anticipated water, oil, gas or other mineral bearing formations are expected to be encountered are as follows:

Oil and Gas Zones	Water Zones	Coal Zones
Meneffe 2935'	Pictured Cliffs 1485'	Fruitland 1475'
Pt. Lookout 3755'	Cliffhouse 2250'	Meneffe 2935'
8. The proposed casing program is as follows:

Surface String: 8-5/8", 24#, J/K-55 @ 150' \*

Production String: 5-1/2", 15.5# J/K-55 @ 3810' (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.

*Shin*

9. Cement Program:  
Surface String: 210 sacks of Class "B" cement or equivalent (1.18 ft<sup>3</sup>/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:** 558 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 FI-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.

Centralizer Program:

Surface: Total four (4) minimum - 10' above shoe and top of 2<sup>nd</sup>, 3<sup>rd</sup>, & 4<sup>th</sup> 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 1<sup>st</sup>, 2<sup>nd</sup>, 4<sup>th</sup>, 6<sup>th</sup>, 8<sup>th</sup>, & 10<sup>th</sup> jts, a cement basket will be run above the Pictured Cliffs, with turbulators above and below it.

Turbulators: Total two (2) - one at 1<sup>st</sup> jt below Pictured Cliffs and 1 jt above the turbulator.

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
- Safety Valve (in open position) and subs to fit all drill strings in use (with handle available)

