

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

RECEIVED

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM 28277	
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 Energen Resources Corporation		7. Unit or CA Agreement Name and No. 32864	
3a. Address 2198 Bloomfield Highway Farmington, New Mexico 87401		8. Lease Name and Well No. Arboles 20 A 1R	
3b. Phone No. (include area code) (505) 325-6800		9. API Well No. 3003927453	
4. Location of Well (Report location clearly and in accordance with any State requirements) At surface 1490' FSL, 790' FWL At proposed prod. zone		10. Field and Pool, or Exploratory Basin Fruitland Coal	
11. Sec., T., R., M., or Blk. and Survey or Area Sec. 20, T32N, R4W, N.M.P.M.		12. County or Parish Rio Arriba	
13. State NM		14. Distance in miles and direction from nearest town or post office* 18 miles North of Gobernador, New Mexico	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) 790'		16. No. of Acres in lease 2480	
17. Spacing Unit dedicated to this well 320 SW/4 S/2		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 50'	
19. Proposed Depth 4270'		20. BLM/BIA Bond No. on file	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 7405' GL		22. Approximate date work will start* August 2003	
23. Estimated duration 5 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.

25. Signature 		Name (Printed/Typed) Don Graham		Date 5/30/03	
Title Production Superintendent		Name (Printed/Typed) DAVID J. MARKIEWICZ		Date SEP - 3 2003	
Approved by (Signature)		Name (Printed/Typed)		Date	
Title		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.

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)

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

DRILLING OPERATIONS AUTHORIZED ARE  
SUBJECT TO COMPLIANCE WITH ATTACHED  
"GENERAL REQUIREMENTS".

HOLD C104 FOR Status Change to #1/well

NMOCD

District I  
PO Box 1980, Hobbs, NM 88241-1980

District II  
PO Drawer DD, Artesia, NM 88211-0719

District III  
1000 Rio Brazos Rd., Aztec, NM 87410

District IV  
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

018  
Form C-102  
Revised February 21, 1994  
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 30-039-27453	<sup>2</sup> Pool Code 71629	<sup>3</sup> Pool Name BASIN FRUITLAND COAL
<sup>4</sup> Property Code 32864	<sup>5</sup> Property Name ARBOLES 20A	<sup>6</sup> Well Number <del>20A</del> 1R
<sup>7</sup> DGRID No. 162928	<sup>8</sup> Operator Name ENERGEN RESOURCES CORPORATION	<sup>9</sup> Elevation 7405'

<sup>10</sup> Surface Location

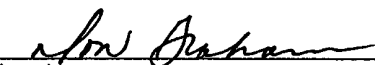

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	20	32N	4W		1490	SOUTH	790	WEST	RIO ARRIBA

<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 320.0 Acres - (S/2)	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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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

<div>16</div> <div>5270.10'</div> <div>RECEIVED</div> <div>2003 JUL 13 AM 11:20</div> <div>070 Farmington, NM</div> <div>5280.00'</div> <div>790'</div> <div>1490'</div> <div>5269.44'</div> <div>20</div>	<div>17 OPERATOR CERTIFICATION</div> <div>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</div> <div></div> <div>Signature Don Graham</div> <div>Printed Name Production Superintendent</div> <div>Title</div> <div>6-12-03</div> <div>Date</div>
	<div>18 SURVEYOR CERTIFICATION</div> <div>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.</div> <div>Survey Date: APRIL 16, 2003</div> <div>Signature and Seal of Professional Surveyor</div> <div></div> <div>JASON C. EDWARDS</div> <div>Certificate Number 15269</div>

## OPERATIONS PLAN

WELL NAME: Arboles 20A #1R

LOCATION: 1490' FSL, 790' FWL, Section 20, T32N, R4W, Rio Arriba County, NM

FIELD: Basin Fruitland Coal

ELEVATION: 7405' GL

### FORMATION TOPS:

Surface	San Jose
Nacimiento	2330
Ojo Alamo	3510
Kirtland	3640
Fruitland	3945

Total Depth            **4270**

### LOGGING PROGRAM:

#### Open Hole Logs:

Surface to intermediate- None

Inter TD to total depth: None

Mud Logs:            Intermediate to total depth

Coring:              None

Natural Gauges:    Every 500' from intermediate TD to total depth

MUD PROGRAM: Fresh water low solids mud from surface to intermediate TD (9.0 PPG).  
Air/mist from intermediate casing point to total depth.

### CASING PROGRAM:

<u>HOLE SIZE</u>	<u>DEPTH</u>	<u>CSG SIZE</u>	<u>WT.</u>	<u>GRADE</u>
12 1/4"	200'	9 5/8"	32.3#	H-40 – ST&C
8 3/4"	4110'	7"	23#	J-55 – LT&C
6 1/4"	4010'-4270'	5 1/2"	15.5#	J-55 – LT&C

### TUBING PROGRAM:

4200'	2 3/8"	4.7#	J-55
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WELLHEAD: 11" 3000 x 9 5/8" casing head. 11" 3000 x 7 1/16" 3000 xmas tree.

### BOP SPECIFICATIONS:

An 11" 2000 psi minimum double gate BOP stack (Figure 1) will be used following nipple up of casing head. During air drilling operations, a Shaffer Type 50 or equivalent rotating head will be installed on top of the stack. A 2" nominal, 2000 psi minimum choke manifold will be used. An upper Kelly Cock valve with handle available and drill string valve to fit each drill string will be available on the rig floor during drilling operations.

**CEMENTING:**

9 5/8" surface casing - cement with 110 sks Class B Cement with 1/4" flocele/sk and 2% calcium chloride (130 cu. ft. of slurry, 100% excess to circulate to surface). WOC 12 hrs. Test casing to 600# for 30 minutes.

Texas Pattern Guide Shoe on bottom. 3 bow type centralizers spaced throughout the string.

7" intermediate casing - cement with 480 sks 65/35 Class B Poz with 6% gel, 2% calcium chloride, 10% gilsonite, and 1/4# flocele/sk. Tail with 100 sks Class B w/2% calcium chloride, 10% gilsonite and 1/4# flocele/sk. (1081 cu. ft. of slurry, 75% excess to circulate to surface). WOC 12 hrs. If cement does not circulate, run temperature survey in 8 hrs. to determine TOC. Test casing to 1200 psi for 30 minutes.

Cement nose guide shoe on bottom with a self-fill insert float valve on top of shoe joint. 10 bow spring centralizers spaced every 2nd joint off bottom. Two turbolating centralizers at the base of the Ojo Alamo.

5 1/2" liner - NO CEMENT

**OTHER INFORMATION:**

- 1) The Basin Fruitland Coal will be completed.
- 2) No abnormal temperatures or pressures are anticipated.
- 3) If lost circulation is encountered sufficient LCM will be added to the mud system to maintain well control.
- 4) This gas is dedicated.
- 5) Anticipated pore pressure for the Fruitland is 700 psi.