

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB NO. 1004-0137  
Expires March 31, 2007

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

2005 JUN 8 PM 3 09

SUBMIT IN TRIPLICATE - Other instructions on reverse side

## 1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

## 2. Name of Operator

Energen Resources Corporation

## 3a. Address

2198 Bloomfield Highway, Farmington, NM 87401

## 3b. Phone No. (include area code)

505.325.6800

## 4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

945' ENL, 1975' FWL, Sec. 27, T32N, R5W, N.M.P.M.  
NE/NW

## 5. Lease Serial No.

NM 29343

## 6. If Indian, Allottee or Tribe Name

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

## 8. Well Name and No.

Carracas 27A 3

## 9. API Well No.

30-039-27660

## 10. Field and Pool, or Exploratory Area

Basin Fruitland Coal

## 11. County or Parish, State

Rio Arriba NM

## 12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

## TYPE OF SUBMISSION

- ☒
- Notice of Intent
- 
- ☐
- Subsequent Report
- 
- ☐
- Final Abandonment Notice

## TYPE OF ACTION

- |  |   |  |   |
|--|---|--|---|
| <input type="checkbox"/> Acidize                 | <input type="checkbox"/> Deepen           | <input type="checkbox"/> Production (Start/Resume) | <input type="checkbox"/> Water Shut-Off |
| <input type="checkbox"/> Alter Casing            | <input type="checkbox"/> Fracture Treat   | <input type="checkbox"/> Reclamation               | <input type="checkbox"/> Well Integrity |
| <input type="checkbox"/> Casing Repair           | <input type="checkbox"/> New Construction | <input type="checkbox"/> Recomplete                | <input type="checkbox"/> Other _____    |
| <input checked="" type="checkbox"/> Change Plans | <input type="checkbox"/> Plug and Abandon | <input type="checkbox"/> Temporarily Abandon       |   |
| <input type="checkbox"/> Convert to Injection    | <input type="checkbox"/> Plug Back        | <input type="checkbox"/> Water Disposal            |   |

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the final site is ready for final inspection.)

Energen Resources plans to make the following changes to the Carracas 27A #3 well:

- \* Change from a vertical drill plan to a horizontal drill plan as indicated on the attached C-102 and directional survey.
- \* Change the setting depth of the 7" intermediate string from 3818' (TVD) to 3871' (TVD), 4150' (MD) and cement with 575 sks of lead followed by 125 sks of tail (1282 cu.ft.)
- \* Change the 5-1/2" production liner to 4-1/2", 11.6#, J-55 LT&C production liner, and set to 3871' (TVD), 5832' (MD).

HOLD C1M FOR

Directional survey

14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

Vicki Donaghey

## Title

Regulatory Analyst

Date 06/03/05

## THIS SPACE FOR FEDERAL OR STATE OFFICE USE

## Approved by

Is/ Adrienne Brumley

## Title

Pet. Eng

## Date

6/20/05

Conditions of approval, if any, are attached. Approval of this notice 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.

## Office

FFO

Title 18 U.S.C. Section 1001, and Title 43 U.S.C. Section 1212, makes 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.

NMOC

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

District II  
PO Drawer 00, 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

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

RECEIVED

070 FARMINGTON, NM

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code	*Property Name CARRACAS		*Well Number 27A-3
*OGRID No. 162928	*Operator Name ENERGEN RESOURCES CORPORATION		*Elevation 7171'

<sup>10</sup> Surface Location

U. or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	27	32N	5W		945	NORTH	1975	WEST	RIO ARriba

<sup>11</sup> Bottom Hole Location If Different From Surface

U. or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	27	32N	5W		2625	NORTH	660	WEST	RIO ARriba

<sup>12</sup> Dedicated Acres 320.0 Acres - (W/2)	<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

<p>16</p> <p>5278.68'</p> <p>945'</p> <p>SURFACE LOCATION</p> <p>1975'</p> <p>660'</p> <p>537°42.9'W</p> <p>2135.2'</p> <p>2625'</p> <p>BOTTOM-HOLE LOCATION</p> <p>660'</p> <p>10'</p> <p>27</p> <p>5276.04'</p> <p>2640.00'</p> <p>5280.00'</p>	<p><sup>17</sup> OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Nathan Smith</i> Signature</p> <p>Nathan Smith Printed Name</p> <p>Drilling Engineer Title</p> <p>6-8-05 Date</p> <p><sup>18</sup> SURVEYOR CERTIFICATION</p> <p>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.</p> <p>Date Revised: JUNE 8, 2005 Survey Date: JANUARY 9, 2004</p> <p>Signature and Seal of Professional Surveyor</p> <p> JASON C. EDWARDS Certificate Number 15269</p>
---	---

## **Operations Plan**

Revised June 2, 2005

### **Carracas 27A #3**

#### **General Information**

Location	945' fnl, 1975' fwl nenw S27, T32N, R5W Rio Arriba County, New Mexico
Elevations	7173' GL
Total Depth	5832' (MD), 3871' (TVD)
Formation Objective	Basin Fruitland Coal

#### **Formation Tops**

San Jose	Surface
Nacimiento	1883' (TVD)
Ojo Alamo Ss	3213' (TVD)
Kirtland Sh	3338' (TVD)
Fruitland Fm	3713' (TVD), 3731' (MD)
Top Coal	3858' (TVD), 4000' (MD)
Bottom Coal	3883' (TVD), 4117' (MD)
<b>Total Depth</b>	<b>3871' (TVD), 5832' (MD)</b>
Pictured Cliffs Ss	3918'

#### **Drilling**

The 12 1/4" wellbore will be drilled with a fresh water mud system.

The 8 3/4" wellbore will be drilled with a low solids fresh water/polymer mud system. Weighting materials will be drill cuttings and if needed barite. Mud density is expected to range from 8.9 ppg to 9.5 ppg. Kick off point is 3460' TVD.

The 6 1/4" wellbore will be drilled with a fresh water or brine water system depending on reservoir characteristics.

##### **Blowout Control Specifications:**

A 2000 psi minimum double ram or annulus BOP stack 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 also be used. An upper Kelly Cock valve handle and drill string valve should be available to fit each drill string and be available on the rig floor during drilling operations.

##### **Logging Program:**

Open hole logs: MWD gamma ray

Mud logs: From kick off point to TD

Natural Gauges: Surface and/or as needed for directional drilling

## Tubulars

### Casing, Tubing, & Casing Equipment:

String	Interval	Wellbore	Casing	Csg Wt	Grade
Surface	0'-200'	12 1/4"	9 5/8"	32.3 ppf	H-40 ST&C
Intermediate	0'-3871' (TVD) 4150' (MD)	8 3/4"	7"	23.0 ppf	J-55 LT&C
Production	3858'-3883' (TVD) 3975'-5832' (MD)	6 1/4"	4 1/2"	11.6 ppf	J-55 LT&C
Tubing	0'-3965'		2 3/8"	4.7 ppf	J-55

### Casing Equipment:

Surface Casing: Depending on wellbore conditions, a Texas Pattern Guide Shoe on bottom. Casing centralization with standard bow spring centralizers to achieve optimal standoff.

Intermediate Casing: Depending on wellbore conditions, a Cement nose guide shoe with self fill insert float collar on top of bottom joint and casing centralization with standard bow spring and rigid centralizers to optimize standoff. Two turbolating centralizers at the base of the Ojo Alamo are recommended.

Liner: Cement nose guide shoe on bottom of first joint. No centralizers.

## Wellhead

3000 psi 11" x 9 5/8" casing head. 9 5/8" x 7"x 2 3/8" 3000 psi Flanged Wellhead .

## Cementing

Surface Casing: 110 sks Std (class B) with 2.0 % CaCl<sub>2</sub> and 1/4 #/sk Flocele (15.6 ppg, 1.18 ft<sup>3</sup>/sk 130 ft<sup>3</sup> of slurry, 100% excess to circulate to surface). WOC 12 hours. Pressure test surface casing to 1000 psi for 30 min.

Intermediate Casing: Before cementing, circulate hole at least 1 1/2 hole volumes of mud and reduce funnel viscosity to minimum to aide in hole cleanout. Depending on wellbore conditions, cement may consist of 575 sks 65/35 Std (class B) with 6.0 % Bentonite, 2.0 % CaCl<sub>2</sub>, 10 #/sk Gilsonite, and 1/2 #/sk Flocele (12.3 ppg, 1.96 ft<sup>3</sup>/sk) and a tail of 125 sks Sts (class B) with 1/4 #/sk Flocele (15.6 ppg, 1.18 ft<sup>3</sup>/sk). (1282 ft<sup>3</sup> of slurry, 100 % excess to circulate to surface). Test casing to 1200 psi for 30 min.

## Other Information

- 1) This well will be an open hole completion.
- 2) If lost circulation is encountered, sufficient LCM will be added to the mud system to maintain well control. The intermediate string may need to be cemented in multiple stages with a slurry design deviated from that listed above.
- 3) If high reservoir pressures or water flows are encountered slurry design may need to be deviated to from those listed above to satisfy wellbore and formation conditions.
- 4) No abnormal temperatures or pressures are anticipated. This gas is dedicated.



Scientific Drilling

Field: Rio Arriba, NM  
Site: Carracas Canyon Section 27 T32N R5W  
Well: Carracas 27A #3  
Wellpath: 1  
Plan: Plan #1

ENERGEN

SECTION DETAILS									
MD	Inc	Azi	TV	+N/S	+E/W	DLeg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3460.00	0.00	0.00	3460.00	0.00	0.00	0.00	0.00	0.00	
4105.60	90.00	217.97	3871.00	-324.00	-252.87	13.94	217.97	411.00	
5831.99	90.00	217.97	3871.00	-1684.98	-1315.03	0.00	0.00	2137.39	27A #3 BHL

WELL DETAILS									
Name	+N/S	+E/W	Northing	Easting	Latitude	Longitude	Slot		
Carracas 27A #3	0.00	0.00	2167545.26	640819.54	36°57'20.988"N	107°21'04.968"W	N/A		

FORMATION TOP DETAILS				
No.	TVDPath	MDPath	Formation	
1	3858.00	4001.95	Top of Coal	

TARGET DETAILS									
Name	TV	+N/S	+E/W	Shape					
27A #3 BHL	3871.00	-1685.00	-1315.00	Point					

