

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM 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.

5. Lease Serial No. **1151.3**

**SF-079488**

6. If Indian, Allottee or Tribe Name

**11: 12**

SUBMIT IN TRIPLICATE - Other instructions on reverse side

RECEIVED

210 FARMINGTON

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

**Energen Resources Corporation**

3a. Address

**2198 Bloomfield Hwy, Farmington, NM 87401**

3b. Phone No. (include area code)

**505-325-6800**

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

**660' fsl, 1800' fw1 31 - 30 N - 4 W**

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

**MMM 78418B**

8. Well Name and No.

**San Juan 30-4 Unit #33C**

9. API Well No.

**30-039-27836**

10. Field and Pool, or Exploratory Area

**Blanco Mesa Verde/  
Gallup**

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

☐ Acidize

☐ Alter Casing

☐ Casing Repair

☒ Change Plans

☐ Convert to Injection

☒ Deepen

☐ Fracture Treat

☐ New Construction

☐ Plug and Abandon

☐ Plug Back

☐ Production (Start/Resume)

☐ Reclamation

☐ Recomplete

☐ Temporarily Abandon

☐ Water Disposal

☐ Water Shut-Off

☐ Well Integrity

☐ Other

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 would like to change the APD approved total depth (TD) from 7302' and deepen to 8607'. Attached is a revised Operations Plan.

- NSL -

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

**Nathan Smith**

Title

**Drilling Engineer**

Date **1/8/07**

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

**Original Signed: Stephen Mason**

Title

Date

**JAN 17 2007**

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

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.

RECEIVED

**Operations Plan**  
Revised January 8, 2007  
**San Juan 30-4 Unit #33C**

**General Information**

Location	660' fsl, 1800' fwl sesw S31, T30N, R04W Rio Arriba County, New Mexico
Elevations	7302' GL
Total Depth	8607' (MD)
Formation Objective	Blanco Mesa Verde/Gallup

**Formation Tops**

San Jose	Surface	Lewis Shale	4682'
Nacimiento	2492'	<b>Int Csg Point</b>	<b>4882'</b>
Ojo Alamo Ss	3767'	Huerfanito Bentonite	5342'
Kirtland Sh	3982'	Cliff House	6207'
Fruitland Fm	4162'	Menefee	6517'
Top Coal	4247'	Point Lookout Ss.	6752'
Bottom Coal	4377'	Mancos Shale	7237'
Pictured Cliffs	4377'	Gallup Ss	7817'
		<b>Total Depth</b>	<b>8607'</b>

**Drilling**

The 12 ¼" wellbore will be drilled with a fresh water mud system.

The 8 ¾" wellbore will be drilled with a low solids non-dispersed fresh water mud system. Weighting materials will be drill cuttings and/or Barite as needed. Mud density is expected to range from 8.3 ppg to 8.9 ppg. Air/mist from intermediate setting depth to TD with a hole size being 6 ¼".

Blowout Control Specifications:

A 2000 psi minimum double ram or annulus 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 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: From Surface to Intermediate setting depth - None  
From Intermediate setting depth to TD - Temp / HRI / CNT, LDT / GR

Mud Logs: None

Coring: None

Surveys: Surface and/or every 500' to TD

**Tubulars**

Casing, Tubing, & Casing Equipment:

String	Interval	Wellbore	Casing	Csg Wt	Grade
Surface	0'-200'	12 ¼"	9 5/8"	32.3 ppf	H-40 ST&C
Intermediate	200'-4882'	8 ¾"	7"	23.0 ppf	J-55 LT&C
Production	4732'-8607'	6 ¼"	4 ½"	11.6 ppf	J-55 LT&C
Tubing	0'-8560'		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 on bottom with self fill insert float collar on top of shoe joint and casing centralization with bow spring centralizers to optimize standoff. Two turbolating centralizers at the base of the Ojo Alamo are recommended. Stage tool to be set at 4100'

**Production Liner:** Depending on wellbore conditions, a cement nose guide shoe on bottom with self fill insert float collar on top of shoe joint and casing centralization with standard bow spring centralizers to optimize standoff. If multistage cementing is required, DV tool will be placed based on formation characteristics.

## Wellhead

11" 3000 x 9 5/8" Casing Head, 11" 3000 x 7 1/16" 3000 Christmas Tree.

## Cementing

Surface Casing: 110 sks Type V with 2.0 %  $\text{CaCl}_2$  and ¼ #/sk Flocele (15.6 ppg, 1.18 ft<sup>3</sup>/sk 247 ft<sup>3</sup> of slurry, 100% excess to circulate to surface). WOC 12 hours. Pressure test surface casing to 600 psi for 30 min.

Intermediate Casing: Before cementing, circulate hole at least 1 ½ hole volumes of mud and reduce funnel viscosity to minimum to aide in hole cleanout. Depending on wellbore conditions, cement may consist of:

*First Stage* - 175 sks 50/50 Poz with 2.0 %  $\text{CaCl}_2$ , 10 #/sk Gilsonite, and ½ #/sk Flocele (13.5 ppg, 1.30 ft<sup>3</sup>/sk). (228 ft<sup>3</sup> of slurry, 90% excess to circulate off stage tool).

*Second Stage* – 540 sks 65/35 cement with 6.0 % Bentonite, 2.0 %  $\text{CaCl}_2$ , 10.0 #/sk Gilsonite, and ½ #/sk Flocele (12.3ppg, 1.93 ft<sup>3</sup>/sk) and tail in with 50 sks Type V "Neat" cement (15.2 ppg, 1.18 ft<sup>3</sup>/sk). (1101 ft<sup>3</sup> of slurry, 100 % excess to circulate to surface). WOC 12 hours. Pressure test casing to 1200 psi for 30 min.

Production Liner: Depending on wellbore conditions, cement may consist of 395 sks 50/50 with 2.0 % Bentonite, 0.40% Halad-9, 0.10% CFR-3, 5 #/sk Gilsonite, and ¼ #/sk Flocele (13.5 ppg, 1.30 ft<sup>3</sup>/sk). (513 ft<sup>3</sup> of slurry, 90 % excess open hole, no excess in liner lap to circulate off liner top). Use calipers on logs to figure cement volumes.

## Other Information

- 1) This well will be cased and the Blanco Mesa Verde/Gallup fracture stimulated.
- 2) If lost circulation is encountered, sufficient LCM will be added to the mud system to maintain well control. The production string may need to be cemented in multiple stages with a slurry design deviated from that listed above.
- 3) Mesa Verde pore pressure is anticipated to be 1100 psi, the Pictured Cliffs is 900 psi and the Fruitland is 800 psi.
- 4) No abnormal temperatures or pressures are anticipated.
- 5) This gas is dedicated.