Form 3160-5
(April 2004)

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.

2005 JUN 22 PM 8 53

SUBMIT IN TRIPLICATE - Other instructions on reverse side

RECEIVED
070 FARMINGTON NM

5. Lease Serial No.
NMNM 29760

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
Carracas 23A 10

2. Name of Operator
Energen Resources Corporation

9. API Well No.
30-039-27549

3a. Address
2198 Bloomfield Highway, Farmington, NM 87401

3b. Phone No. *(include area code)*
505.325.6800

10. Field and Pool, or Exploratory Area
Basin Fruitland Coal

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
1350' FSL, 1975' FEL, Sec.23, T32N, R05W, N.M.P.M.
NW/SE

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	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☒ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ 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 recomplete 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 recompletion 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 23A #10 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 3742'(TVD) to 3792' (TVD), 4050' (MD) and cement with 545 sks of lead followed by 125 sks of tail (1223 cu.ft.)

* Change the 5-1/2" production liner to 4-1/2", 11.6#, J-55 LT&C production liner, and set to 3792' (TVD), 5112' (MD).

HOLD C104 FOR Directional Survey

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

Title
Regulatory Analyst

Vicki Donaghey

Date 06/03/05

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by Adrienne Brumley

Title Pet. Eng.

Date 6/23/05

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.

NMOCD

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240

DISTRICT II
811 South First, Artesia, N.M. 88210

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

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-102
Revised August 15, 2000

Submit to Appropriate District Office
State Lease – 4 Copies
Fee Lease – 3 Copies

☐ AMENDED REPORT

2005 JUN 22 AM 8 53
RECEIVED
070 FARMINGTON NM

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
	71629	BASIN FRUITLAND COAL

[4] Property Code	[5] Property Name	[6] Well Number
	CARRACAS CANYON UNIT	23A-10

[7] OGRID No.	[8] Operator Name	[9] Elevation
162928	ENERGEN RESOURCES CORPORATION	7167'

[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
J	23	32N	5W		1350'	SOUTH	1975'	EAST	RIO ARRIBA

[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
I	23	32N	5W		1980'	SOUTH	660'	EAST	RIO ARRIBA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
320.00 Acres – (S/2)			

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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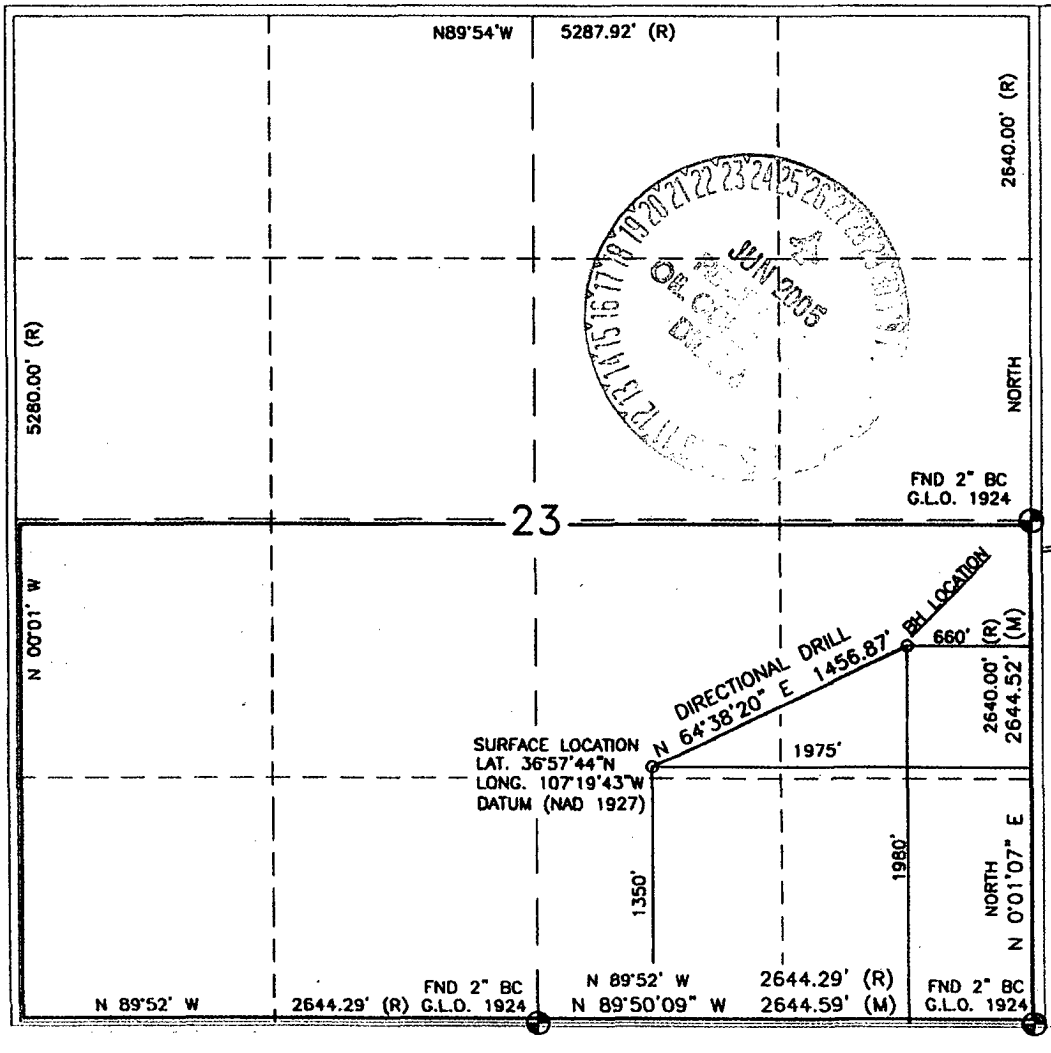

[17] OPERATOR CERTIFICATION

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

Signature

Nathan Smith
Printed Name

Drilling Engineer
Title

6/21/05
Date

[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.

JUNE 14, 2005
Date of Survey

Signature and Seal of Professional Surveyor:

DAVID R. RUSSELL
NEW MEXICO
10201
REGISTERED PROFESSIONAL LAND SURVEYOR

Certificate Number 10201

Operations Plan

Revised June 2, 2005

Carracas 23A #10

General Information

Location	1350' fsl, 1975' fel nwse S23, T32N, R5W Rio Arriba County, New Mexico
Elevations	7167' GL
Total Depth	5112' (MD), 3792' (TVD)
Formation Objective	Basin Fruitland Coal

Formation Tops

San Jose	Surface
Nacimiento	1787' (TVD)
Ojo Alamo Ss	3132' (TVD)
Kirtland Sh	3257' (TVD)
Fruitland Fm	3692' (TVD), 3720' (MD)
Top Coal	3782' (TVD), 3900' (MD)
Bottom Coal	3802' (TVD), 3925' (MD)
Total Depth	**3792' (TVD), 5112' (MD)**
Pictured Cliffs Ss	3842' (TVD)

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 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 3470' TVD.
The 6 ¼" 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 ¼"	9 5/8"	32.3 ppf	H-40 ST&C
Intermediate	0'-3792' (TVD) 4050' (MD)	8 ¾"	7"	23.0 ppf	J-55 LT&C
Production	3792'-3792' (TVD) 3975'-5112' (MD)	6 ¼"	4 ½"	11.6 ppf	J-55 LT&C
Tubing	0'-3950'		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 % $CaCl_2$ and ¼ #/sk Flocele (15.6 ppg, 1.18 ft^3/sk 130 ft^3 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 ½ hole volumes of mud and reduce funnel viscosity to minimum to aide in hole cleanout. Depending on wellbore conditions, cement may consist of 545 sks 65/35 Std (class B) with 6.0 % Bentonite, 2.0 % $CaCl_2$, 10 #/sk Gilsonite, and ½ #/sk Flocele (12.3 ppg, 1.96 ft^3/sk) and a tail of 125 sks Sts (class B) with ¼ #/sk Flocele (15.6 ppg, 1.18 ft^3/sk). (1223 ft^3 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 23 T32N R5W-
Well: Carracas 23A #10
Wellpath: 1
Plan: Plan #1

ENERGEN

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+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	
	3470.00	0.00	0.00	3470.00	0.00	0.00	0.00	0.00	0.00	
	3975.80	90.00	64.40	3792.00	139.13	290.39	17.79	64.40	322.00	
	5111.92	90.00	64.40	3792.00	630.03	1314.98	0.00	0.00	1458.12	23A-10 BHL

Section 23 T32N R5W
SHL
1350 FSL,1975 FEL
BHL
1980 FSL , 660 FEL

Azimuths to Grid North
True North: -0.30°
Magnetic North: 10.16°

Magnetic Field
Strength: 51585nT
Dip Angle: 63.88°
Date: 2005-06-02
Model: igrf2005

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting
Carracas 23A #10	0.00	0.00	2169905.86	647460.81

FORMATION TOP DETAILS

No.	*TVDPath*	*MDPath*	*Formation*
1	*3782.00*	*3895.34*	*Top of Coal*

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
23A-10 BHL	3792.00	630.00	1315.00	Point