

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED

FORM APPROVED  
OMB NO. 1004-0137  
Expires July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS MAY 05 2011

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals on Field Office Bureau of Land Management.

SUBMIT IN TRIPLICATE - Other instructions on page 2

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

2. Name of Operator  
Energen Resources Corporation

3a. Address  
2010 Afton Place, Farmington, NM 87401

3b. Phone No. (include area code)  
(505) 325-6800

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
SHL: 1702' FNL, 1865' FEL (G) Sec. 15 T 32N R 4W  
BHL: 250' FSL, 1850' FEL (P) Sec. 14 T 32N R 4W

5. Lease Serial No.

NM 28812

6. If Indian, Allottee or Tribe Name

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

~~MINN-1-00462~~  
Carracas Canyon Unit

8. Well Name and No.  
Carracas 14 B 2H

9. API Well No.

30-039-30962

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	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<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 recomplate 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.)

In order to drill along strike the BHL of the Carracas 14B #2H will be changed to 250' FSL and 1850' FEL of Sec. 14. The new C-102, Operation and drilling plan are attached.

CONDITIONS OF APPROVAL

Adhere to previously issued stipulations.

\* Hold C-104 for As-Drilled Plat & directional survey  
\* Hold C-104 for SD order and approval from SF (well 30-039-24650 in UL(J))

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

Hold C104  
for Directional Survey  
and "As Drilled" plat

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

Devin Mills

Title Drilling Engineer

Signature

Date 5/5/11

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Pete Eng.

Date

8/16/11

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

OPERATOR-NMUCD

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



### OPERATIONS PLAN

**WELL NAME**.....Carracas 14B #2H  
**JOB TYPE**.....Horizontal OPE FTC  
**DEPT**.....Drilling and Completions  
**PREPARED BY**.....Devin Mills

### GENERAL INFORMATION

Surface Location	1702 FNL 1865 FEL
S-T-R	Sec. 15, T32N, R04W
Bottom Hole Location	250 FSL 1850 FEL
S-T-R	Sec. 14, T32N, R04W
County, State	Rio Arriba, New Mexico
Elevations	6536' GL
Total Depth	9079' +/- (MD); 3371' (TVD)
Formation Objective	Basin Fruitland Coal

### FORMATION TOPS

San Jose	Surface
Nacimiento	1490' (TVD)
Ojo Alamo Ss	2740' (TVD)
Kirtland Sh	2877' (TVD)
Fruitland Fm	3182' (TVD) 3410'MD
Top Target Coal	3363' (TVD) 3980'MD
Base Target Coal	3371' (TVD)
<b>Total Depth</b>	<b>3371' (TVD), 9079' (MD)</b>

### DRILLING

**Surface:** 12-1/4" wellbore will be drilled with a fresh water mud system (spud mud).

**Intermediate:** 8-3/4" wellbore will be drilled with a LSND mud system. Weighting materials will be drill cuttings and if needed barite. Mud density is expected to range from 8.4 ppg to 9.0 ppg.

**Production:** 6-1/4" wellbore will be drilled with a fresh water or brine water system depending on reservoir characteristics. Anticipated BHP can be as high as 1500 psi.

**Projected KOP is 2700' TVD with 4.34°/100' doglegs.**

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

A 3000 psi minimum double ram or annulus BOP stack will be used following nipple up of casing head. 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. **Pressure test BOP to 250 psi for 15 min and 2000 psi for 15 min.**

#### **Logging Program:**

Open hole logs: None

Mudlogs: 2700' TVD, 2735' MD to TD

Surveys: Surface to KOP every 500' and a minimum of every 200' for directional.

### **CASING, TUBING & CASING EQUIPMENT**

String	Start Depth	End Depth	Wellbore	Size	Wt	Grade
Surface	0	200	12-1/4"	9-5/8"	32.3 lb/ft	H-40 ST&C
Intermediate TVD	0 0	4125 3371	8-3/4"	7"	23 lb/ft	J-55 LT&C
Prod. Liner TVD	4100 3370	9079 3371	6-1/4"	4-1/2"	11.6 lb/ft	J-55 LT&C
Tubing	0	3900	none	2-3/8"	4.7 lb/ft	J-55

**Surface Casing:** Texas Pattern Guide Shoe on bottom of first joint and an insert float valve on top of first joint. Casing centralization with a minimum of 3 standard bow spring centralizers to achieve optimal standoff.

**Intermediate Casing:** Self fill float shoe with self fill float collar on bottom and top of first joint. Casing centralization with double bow spring and centralizers to optimize standoff.

**Production Liner:** Bull nose guide shoe on bottom of first joint, H-Latch liner drop off tool on top of last joint.

### **WELLHEAD**

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

### **CEMENTING**

**Surface Casing:** 125 sks Type V with 2.0 % CaCl<sub>2</sub> and ¼ #/sk Flocele (15.6 ppg, 1.18 ft<sup>3</sup>/sk 148 ft<sup>3</sup> of slurry, 100% excess to circulate to surface). WOC 12 hours. Pressure test surface casing to 750 psi for 30 min.

**Intermediate Casing:** Depending on wellbore conditions, cement may consist of 292 sks 65/35 with 6.0 % Bentonite, 2.0 % CaCl<sub>2</sub>, 10 #/sk Gilsonite, and ½ #/sk Flocele (12.3 ppg, 1.93 ft<sup>3</sup>/sk) and a tail of 150 sks Class G with ¼ #/sk Flocele (15.6 ppg, 1.18 ft<sup>3</sup>/sk). (743 ft<sup>3</sup> of slurry, 100% excess to circulate to surface). WOC 12 hours. Test casing to 1500 psi for 30 min.

**Production Liner:** NO CEMENT, Open Hole Completion

**Set slips with full string weight**

If cement does not circulate, run temperature survey in 8 hrs. to determine TOC.

### **OTHER INFORMATION**

- 1) This well will be an open hole completion lined with an uncemented pre-drilled liner.
- 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.

6/16/2011

**ENERGEN**  
R E S O U R C E S

5) This gas is dedicated.

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

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised July 16, 2010

DISTRICT II  
1301 W. Grand Avenue, Artesia, N.M. 88210

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

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Submit one copy to appropriate  
District Office

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number	<sup>2</sup> Pool Code 71629	<sup>3</sup> Pool Name BASIN FRUITLAND COAL
<sup>4</sup> Property Code 35644	<sup>5</sup> Property Name CARRACAS 14 B	<sup>6</sup> Well Number 2
<sup>7</sup> GRID No. 162928	<sup>8</sup> Operator Name ENERGEN RESOURCES CORPORATION	<sup>9</sup> Elevation 6536'

<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
G	15	32N	4W		1702'	NORTH	1865'	EAST	RIO ARRIBA

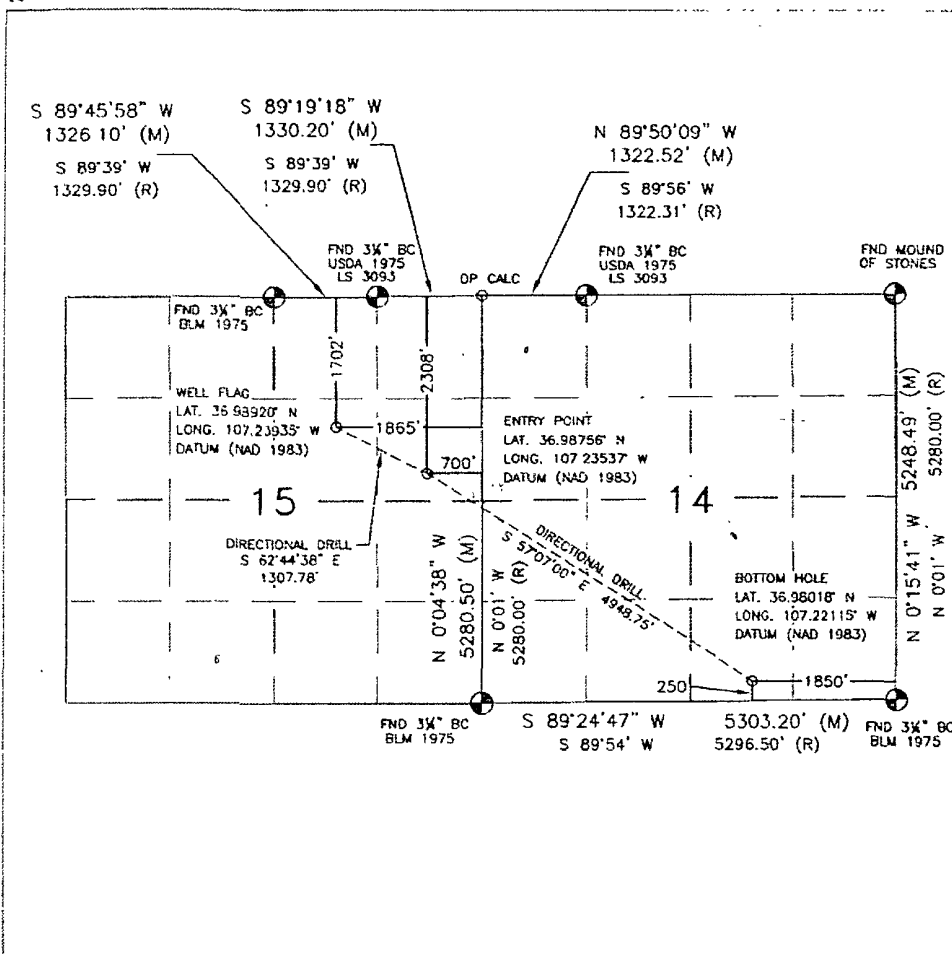
<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	14	32N	4W		250'	SOUTH	1850'	EAST	RIO ARRIBA

<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No. R-8368
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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

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<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, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

*Signature* *S-2-11*  
*Date*

*DEVIN MILLS*  
*Printed Name*

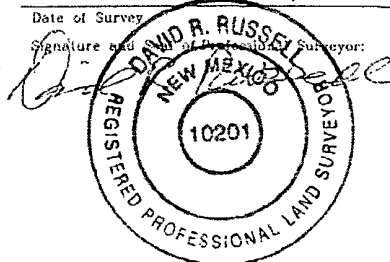
*DMILLS@ENERGEN.COM*  
*E-mail Address*

<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.

SEPTEMBER 24, 2010

*Signature* *DAVID R. RUSSELL*  
*Date of Survey*



*DAVID RUSSELL*  
*Certificate Number* 10201

Project: Carson National Forest  
 Site: 14B; Sec 14 T32N R4E  
 Well: Carracas 14B #2  
 Wellbore: Wellbore #1

PROJECT DETAILS: Carson National Forest  
 Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: New Mexico Central Zone  
 System Datum: Mean Sea Level



Azimuths to True North  
 Magnetic North: 9.86°  
 Magnetic Field  
 Strength: 51121.0snT  
 Dip Angle: 63.82°  
 Date: 12/31/2009  
 Model: IGRF200510

#### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2050.0	0.00	0.00	2050.0	0.0	0.0	0.00	0.00	0.0	
3	4125.0	90.00	122.00	3371.0	-700.0	1120.3	4.34	122.00	1321.0	
4	9079.2	90.00	122.00	3371.0	-3325.3	5321.7	0.00	0.00	6275.2	14B2 BHL

