Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
JUN 01 2009
Bureau of Land Management
Farmington Field Office

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

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.

SUBMIT IN TRIPLICATE - *Other instructions on page 2*

5. Lease Serial No.
NMNM 28277

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 17B # 1

2. Name of Operator
Energen Resources Corporation

9. API Well No.
30-039-30472

3a. Address
2010 Afton Place, 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)*
SHL: (P) Sec.17, T32N, R4W 595'FSL & 2055'FEL
BHL: (M) Sec.17, T32N, R4W 110'FNL & 110'FEL

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 would like to make the following change to the Carracas 17B #1. The changes will be pertaining to the landing point of the 7" int. casing and the BHL:

* Change kick-off point to 3232'MD
* Change int. casing setting measured depth (MD) TD to 4726' MD and cement with 380 sks lead followed by 100 sks tail.
* Change the TD of the well to 8805' (MD) and run the 4 1/2" liner to this depth with a new liner top of 4500' (MD).
* Change the bottom hole footage location to 110'FNL 110'FEL ✓

Attached is a revised directional drilling and operations plan.
The changes made reflect NMOCD approval for order no. R-13119 Carracas Canyon. ✓

RCVD JUN 4 '09
OIL CONS. DIV.
DIST. 3

Hold C104
for Directional Survey
and "As Drilled" plat

CONDITIONS OF APPROVAL
Adhere to previously issued stipulations.

14 I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)* Devin Mills
Title Drilling Engineer
Signature
Date 6/1/2009

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by Troy L. Salyers
Title Petroleum Engineer
Date 6/3/2009
Office FFO

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.

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

Operations Plan
June 1, 2009

Carracas 17 B #1

General Information

Location	595' fsl, 2055' fel at surface 110' fnl, 110' fel at bottom nene 17, T32N, R4W Rio Arriba County, New Mexico
Elevations	7366' GL
Total Depth	8805' (MD), 4211' (TVD)
Formation Objective	Basin Fruitland Coal

Formation Tops

San Jose	Surface
Nacimiento	2341' (TVD), 2341' (MD)
Ojo Alamo Ss	3499' (TVD), 3502' (M)D
Kirtland Sh	3630' (TVD), 3642' (MD)
Fruitland Fm	3919' (TVD), 3999' (MD)
Top Coal	4187' (TVD), 4726' (MD)
Bottom Coal	4211' (TVD)
Total Depth	**4211' (TVD), 8805' (MD)**

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.
Projected KOP is 3232' TVD with 6°/100' doglegs.
The 6 ¼" wellbore will be drilled with a fresh water or brine water system depending on reservoir characteristics. Anticipated BHP can be as high as 1100 psi.
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: None
Mud logs: From 3919' (TVD), 3999' (MD) to TD.
Surveys: Surface to KOP every 500' and a minimum of every 250' for directional.

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'-4187'(TVD) 4726' (MD)	8 ¾"	7"	23.0 ppf	J-55 LT&C
Production	4165'-4216' (TVD) 4500'-8806' (MD)	6 ¼"	4 ½"	11.6 ppf	J-55 LT&C
Tubing	0'-4567'(MD)		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. 3 minimum

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

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: 125 sks Std (class B) with 2.0 % $CaCl_2$ and ¼ #/sk Flocele (15.6 ppg, 1.18 ft^3/sk 148 ft^3 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 380 sks 65/35 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 100 sks Type V with ¼ #/sk Flocele (15.6 ppg, 1.18 ft^3/sk). (862ft^3 of slurry, 20% excess to circulate to surface). Test casing to 1200 psi for 30 min.

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. This gas is dedicated.

Energen Resources

Carson National Forest
17B; Sec. 17 T 32N 4W
Carracas 17B #1
Wellbore #1

Plan: Design #1 2

APD REPORT

02 June, 2009

Energen
APD REPORT

Company:	Energen Resources	**Local Co-ordinate Reference:**	Well Carracas 17B #1
Project:	Carson National Forest	**TVD Reference:**	WELL @ 7380 0ft (Original Well Elev)
Site:	17B; Sec. 17 T 32N 4W	**MD Reference:**	WELL @ 7380 0ft (Original Well Elev)
Well:	Carracas 17B #1	**North Reference:**	True
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #1	**Database:**	EDM 2003.21 Single User Db

Project Carson National Forest

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Central Zone		

Site 17B; Sec. 17 T 32N 4W

Site Position:		**Northing:**	2,178,001 10 ft	**Latitude:**	36° 58' 51 672 N
From:	Lat/Long	**Easting:**	1,340,707.36 ft	**Longitude:**	107° 16' 34.032 W
Position Uncertainty:	0 0 ft	**Slot Radius:**	"	**Grid Convergence:**	-0 62 °

Well Carracas 17B #1

Well Position	**+N/-S**	0 0 ft	**Northing:**	2,178,001 10 ft	**Latitude:**	36° 58' 51 672 N
	+E/-W	0.0 ft	**Easting:**	1,340,707 36 ft	**Longitude:**	107° 16' 34 032 W
Position Uncertainty		0 0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	7,366 0 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	5/12/2009	9.96	63.82	51,166

Design Design #1

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	23 14

Survey Tool Program **Date** 6/2/2009

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0 0	8,727.3	Design #1 (Wellbore #1)	MWD	MWD - Standard

Planned Survey

MD (ft)	TVD (ft)	Inc (°)	Azi (azimuth) (°)	Build (°/100ft)	V. Sec (ft)	Northing (ft)	Easting (ft)
0 0	0 0	0.00	0 00	0.00	0.0	2,178,001 10	1,340,707 36
100 0	100.0	0 00	0 00	0.00	0 0	2,178,001.10	1,340,707 36
200 0	200 0	0 00	0 00	0.00	0.0	2,178,001.10	1,340,707 36
300.0	300 0	0 00	0.00	0.00	0 0	2,178,001.10	1,340,707 36
400.0	400.0	0 00	0.00	0 00	0 0	2,178,001.10	1,340,707 36
500.0	500.0	0 00	0 00	0.00	0 0	2,178,001 10	1,340,707 36
600.0	600.0	0 00	0 00	0 00	0.0	2,178,001 10	1,340,707 36
700.0	700 0	0 00	0 00	0 00	0.0	2,178,001 10	1,340,707 36
800.0	800 0	0.00	0 00	0 00	0.0	2,178,001 10	1,340,707 36
900.0	900 0	0.00	0 00	0 00	0.0	2,178,001 10	1,340,707 36
1,000.0	1,000 0	0.00	0 00	0.00	0.0	2,178,001 10	1,340,707 36
1,100.0	1,100 0	0 00	0.00	0.00	0 0	2,178,001 10	1,340,707 36

Energen
APD REPORT

Company:	Energen Resources	**Local Co-ordinate Reference:**	Well Carracas 17B #1
Project:	Carson National Forest	**TVD Reference:**	WELL @ 7380 0ft (Original Well Elev)
Site:	17B; Sec. 17 T 32N 4W	**MD Reference:**	WELL @ 7380.0ft (Original Well Elev)
Well:	Carracas 17B #1	**North Reference:**	True
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #1	**Database:**	EDM 2003.21 Single User Db

Planned Survey

MD (ft)	TVD (ft)	Inc (°)	Azi (azimuth) (°)	Build (°/100ft)	V. Sec (ft)	Northing (ft)	Easting (ft)
1,200.0	1,200 0	0.00	0 00	0.00	0 0	2,178,001 10	1,340,707.36
1,300.0	1,300 0	0 00	0 00	0 00	0 0	2,178,001.10	1,340,707 36
1,400.0	1,400 0	0.00	0 00	0 00	0.0	2,178,001 10	1,340,707 36
1,500 0	1,500.0	0 00	0.00	0 00	0 0	2,178,001 10	1,340,707 36
1,600.0	1,600 0	0 00	0 00	0 00	0.0	2,178,001.10	1,340,707.36
1,700 0	1,700 0	0.00	0 00	0 00	0 0	2,178,001 10	1,340,707 36
1,800 0	1,800.0	0 00	0.00	0 00	0 0	2,178,001.10	1,340,707 36
1,900.0	1,900.0	0 00	0 00	0 00	0 0	2,178,001.10	1,340,707 36
2,000 0	2,000 0	0 00	0 00	0 00	0 0	2,178,001 10	1,340,707 36
2,100 0	2,100 0	0.00	0 00	0.00	0 0	2,178,001 10	1,340,707 36
2,200 0	2,200 0	0 00	0 00	0.00	0 0	2,178,001.10	1,340,707.36
2,300 0	2,300 0	0.00	0 00	0 00	0 0	2,178,001 10	1,340,707 36
2,400 0	2,400.0	0.00	0 00	0 00	0 0	2,178,001.10	1,340,707 36
2,500 0	2,500.0	0 00	0 00	0.00	0 0	2,178,001.10	1,340,707 36
2,600 0	2,600.0	0.00	0 00	0 00	0 0	2,178,001 10	1,340,707 36
2,700 0	2,700.0	0.00	0 00	0.00	0 0	2,178,001.10	1,340,707 36
2,800.0	2,800 0	0 00	0.00	0.00	0 0	2,178,001 10	1,340,707 36
2,900 0	2,900 0	0 00	0.00	0 00	0 0	2,178,001.10	1,340,707 36
3,000 0	3,000 0	0.00	0 00	0 00	0 0	2,178,001 10	1,340,707 36
3,100 0	3,100 0	0 00	0 00	0 00	0.0	2,178,001 10	1,340,707 36
3,200 0	3,200.0	0 00	0.00	0 00	0 0	2,178,001.10	1,340,707 36
3,232 0	3,232.0	0.00	0 00	0 00	0.0	2,178,001.10	1,340,707 36
3,300 0	3,299 9	4.08	23 14	6 00	2 4	2,178,003 32	1,340,708 33
3,400 0	3,399 1	10.08	23.14	6.00	14 7	2,178,014.59	1,340,713.29
3,500.0	3,496.5	16 08	23 14	6 00	37.4	2,178,035 29	1,340,722.41
3,600.0	3,591 0	22.08	23 14	6 00	70.0	2,178,065 20	1,340,735.57
3,700 0	3,681 5	28 08	23 14	6 00	112.4	2,178,103 97	1,340,752.64
3,800 0	3,767 1	34 08	23.14	6 00	164.0	2,178,151 19	1,340,773.42
3,900 0	3,846 8	40 08	23 14	6 00	224 2	2,178,206 35	1,340,797 70
4,000 0	3,919.9	46 08	23 14	6.00	292.5	2,178,268.83	1,340,825 20
4,100 0	3,985.3	52 07	23.14	6 00	368 0	2,178,337 95	1,340,855.63
4,200 0	4,042 6	58.07	23 14	6 00	450 0	2,178,412 96	1,340,888 64
4,300.0	4,090 9	64 07	23 14	6 00	537.5	2,178,493 03	1,340,923 89
4,400.0	4,129 8	70 07	23 14	6.00	629 5	2,178,577 29	1,340,960 97
4,500 0	4,158.9	76 07	23.14	6 00	725 2	2,178,664 81	1,340,999 50
4,600.0	4,177 9	82 07	23 14	6 00	823.3	2,178,754.63	1,341,039.03
4,700 0	4,186 5	88.07	23 14	6.00	922 9	2,178,845.78	1,341,079 15
4,725 5	4,187 0	89 60	23.14	6.00	948 4	2,178,869 09	1,341,089.41
4,800 0	4,187.5	89.60	23 14	0 00	1,022.9	2,178,937 30	1,341,119 44
4,900 0	4,188 2	89 60	23 14	0 00	1,122.9	2,179,028.82	1,341,159 72
5,000 0	4,188.9	89 60	23.14	0 00	1,222 9	2,179,120 34	1,341,200.01
5,100.0	4,189.6	89.60	23 14	0.00	1,322 9	2,179,211 87	1,341,240.29
5,200.0	4,190.3	89.60	23 14	0.00	1,422.9	2,179,303 39	1,341,280 58
5,300 0	4,191 0	89 60	23 14	0 00	1,522 9	2,179,394 91	1,341,320.86

Energen
APD REPORT

Company:	Energen Resources	**Local Co-ordinate Reference:**	Well Carracas 17B #1
Project:	Carson National Forest	**TVD Reference:**	WELL @ 7380 0ft (Original Well Elev)
Site:	17B, Sec. 17 T 32N 4W	**MD Reference:**	WELL @ 7380.0ft (Original Well Elev)
Well:	Carracas 17B #1	**North Reference:**	True
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #1	**Database:**	EDM 2003.21 Single User Db

Planned Survey

MD (ft)	TVD (ft)	Inc (°)	Azi (azimuth) (°)	Build (°/100ft)	V. Sec (ft)	Northing (ft)	Easting (ft)
5,400 0	4,191.7	89.60	23.14	0 00	1,622 9	2,179,486 44	1,341,361 15
5,500 0	4,192.4	89 60	23 14	0 00	1,722 9	2,179,577 96	1,341,401 43
5,600 0	4,193.1	89 60	23 14	0.00	1,822 9	2,179,669 49	1,341,441.72
5,700.0	4,193 8	89 60	23 14	0 00	1,922.9	2,179,761.01	1,341,482.00
5,800 0	4,194 5	89.60	23 14	0.00	2,022.9	2,179,852 53	1,341,522 29
5,900.0	4,195 2	89 60	23 14	0 00	2,122 8	2,179,944 06	1,341,562 57
6,000 0	4,195 9	89 60	23.14	0.00	2,222 8	2,180,035.58	1,341,602.86
6,100 0	4,196.6	89 60	23.14	0 00	2,322.8	2,180,127 10	1,341,643 14
6,200.0	4,197 3	89 60	23 14	0.00	2,422 8	2,180,218.63	1,341,683.43
6,300 0	4,198 0	89.60	23.14	0 00	2,522 8	2,180,310 15	1,341,723 72
6,400 0	4,198.7	89 60	23.14	0 00	2,622 8	2,180,401 67	1,341,764.00
6,500.0	4,199 4	89 60	23 14	0.00	2,722 8	2,180,493 20	1,341,804 29
6,600 0	4,200.1	89 60	23 14	0 00	2,822 8	2,180,584 72	1,341,844.57
6,700 0	4,200.8	89 60	23.14	0 00	2,922 8	2,180,676 24	1,341,884 86
6,800 0	4,201 5	89.60	23.14	0 00	3,022 8	2,180,767 77	1,341,925 14
6,900 0	4,202.2	89 60	23 14	0 00	3,122.8	2,180,859 29	1,341,965 43
7,000 0	4,202.9	89 60	23 14	0.00	3,222 8	2,180,950 82	1,342,005 71
7,100.0	4,203 6	89.60	23 14	0 00	3,322 8	2,181,042 34	1,342,046 00
7,200 0	4,204 3	89.60	23.14	0 00	3,422 8	2,181,133 86	1,342,086 28
7,300 0	4,205.0	89.60	23.14	0 00	3,522.8	2,181,225 39	1,342,126.57
7,400 0	4,205 7	89.60	23 14	0 00	3,622 8	2,181,316 91	1,342,166 85
7,500.0	4,206 4	89 60	23.14	0.00	3,722 8	2,181,408 43	1,342,207 14
7,600 0	4,207 1	89 60	23 14	0 00	3,822.8	2,181,499 96	1,342,247.43
7,700.0	4,207 8	89.60	23 14	0 00	3,922 8	2,181,591 48	1,342,287 71
7,800 0	4,208.5	89.60	23 14	0 00	4,022 8	2,181,683.00	1,342,328 00
7,900 0	4,209 2	89.60	23 14	0 00	4,122 8	2,181,774 53	1,342,368 28
8,000.0	4,209 9	89 60	23 14	0.00	4,222 8	2,181,866 05	1,342,408 57
8,100.0	4,210 6	89 60	23 14	0.00	4,322.8	2,181,957.57	1,342,448.85
8,200 0	4,211 3	89 60	23.14	0 00	4,422.8	2,182,049 10	1,342,489 14
8,300 0	4,212 0	89.60	23 14	0 00	4,522.8	2,182,140 62	1,342,529 42
8,400.0	4,212 7	89 60	23 14	0 00	4,622 8	2,182,232.15	1,342,569 71
8,500 0	4,213.4	89 60	23.14	0.00	4,722 8	2,182,323 67	1,342,609.99
8,600.0	4,214 0	89 60	23 14	0 00	4,822.8	2,182,415 19	1,342,650.28
8,700 0	4,214 7	89 60	23.14	0 00	4,922 8	2,182,506 72	1,342,690 56
8,727 3	4,214.9	89.60	23 14	0 00	4,950 1	2,182,531.74	1,342,701.58

Checked By: _____ Approved By: _____ Date: _____

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 96°

Magnetic Field
Strength. 51166.3snT
Dip Angle: 63 82°
Date 5/12/2009
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	3232 0	0.00	0.00	3232 0	0.0	0.0	0 00	0 00	0 0	
3	4725.5	89 60	23 14	4187.0	872.1	372 7	6 00	23 14	948 4	
4	8727 3	89 60	23.14	4214 9	4551 9	1945 3	0.00	0 00	4950 1	Bottom hole 17b 1