

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

RECEIVED

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.

Bureau of Land Management

SUBMIT IN TRIPLICATE - Other instructions on page 2

Farmington Field Office

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: (P) Sec.17, T32N, R4W 802'FSL & 1853'FWL

BHL: (A) Sec.17, T32N, R4W 110'FNL & 2400'FWL

(C)

5. Lease Serial No

NMM 28277

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.

Carracas 17B # 3

9. API Well No.

30-039-30467

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

- ☐ Acidize ☐ Deepen ☐ Production (Start/Resume) ☐ Water Shut-Off
☐ Alter Casing ☐ Fracture Treat ☐ Reclamation ☐ Well Integrity
☐ 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 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 make the following change to the Carracas 17B #3. The changes will be pertaining to the landing point of the 7" int. casing and the BHL:

- * Change kick-off point to 3250' MD-TVD
- * Change int. casing setting measured depth (MD) to 4821' MD and cement with 380 sks lead followed by 115 sks tail.
- * Change the TD of the well to 8223' (MD) and run the 4 1/2" liner to this depth with a new liner top of 4770' (MD).
- * Change the bottom hole footage location to 110'FNL 2400'FWL ✓

Attached is a revised directional drilling and operations plan.

The changes made reflect NMCD approval for order no. R-13119 Carracas Canyon.

RCVD JUN 18 '09
OIL CONS. DIV.
DIST. 3

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 6/10/2009

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Troy L. Salyers

Title

NMCD Petroleum Engineer

Date

6/15/2009

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.

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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.

Operations Plan

June 10, 2009

Carracas 17 B #3

General Information

Location	802' fsl, 1853' fel at surface 110' fnl, 2400' fel at bottom nene 17, T32N, R4W Rio Arriba County, New Mexico
Elevations	7441' GL
Total Depth	8223' (MD), 4250' (TVD)
Formation Objective	Basin Fruitland Coal

Formation Tops

San Jose	Surface
Nacimiento	2366' (TVD), 2366' (MD)
Ojo Alamo Ss	3585' (TVD), 3592' (MD)
Kirtland Sh	3705' (TVD), 3722' (MD)
Fruitland Fm	3785' (TVD), 3815' (MD)
Top Coal	4239' (TVD), 4672' (MD)
Bottom Coal	4263' (TVD)
Total Depth	4250' (TVD), 8223' (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 3250' TVD with 5.73°/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 3785' (TVD), 3815' (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 1/4"	9 5/8"	32.3 ppf	H-40 ST&C
Intermediate	0'-4250'(TVD) 4821' (MD)	8 3/4"	7"	23.0 ppf	J-55 LT&C
Production	4248'-4250' (TVD) 4770'-8223' (MD)	6 1/4"	4 1/2"	11.6 ppf	J-55 LT&C
Tubing	0'-4646'(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.

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 % CaCl₂ and 1/4 #/sk Flocele (15.6 ppg, 1.18 ft³/sk 148 ft³ of slurry, 100% excess to circulate to surface). WOC 12 hours. Pressure test surface casing to 750 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 379 sks 65/35 with 6.0 % Bentonite, 2.0 % CaCl₂, 10 #/sk Gilsontite, and 1/2 #/sk Flocele (12.3 ppg, 1.96 ft³/sk) and a tail of 115 sks Type V with 1/4 #/sk Flocele (15.6 ppg, 1.18 ft³/sk). (878ft³ of slurry, 20% excess to circulate to surface). Test casing to 1500 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 #3

Wellbore #1

Plan: Design #12

APD REPORT

10 June, 2009

Energen APD REPORT

Company: Energen Resources Project: Carson National Forest Site: 17B; Sec. 17 T 32N 4W Well: Carracas 17B #3 Wellbore: Wellbore #1 Design: Design #1	Local Co-ordinate Reference: Well Carracas 17B #3 TVD Reference: WELL @ 7455.0ft (Original Well Elev) MD Reference: WELL @ 7455.0ft (Original Well Elev) North Reference: True Survey Calculation Method: Minimum Curvature Database: EDM 2003 21 Single User Db
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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:	2,178,001.10ft	Latitude:	36° 58' 51.672 N
From:	Lat/Long	Easting:	1,340,707.36ft	Longitude:	107° 16' 34.032 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	-0.62 °

Well	Carracas 17B #3					
Well Position	+N-S	0.1ft	Northing:	2,178,222.83 ft	Latitude:	36° 58' 53.719 N
	+E-W	0.0 ft	Easting:	1,339,347.58 ft	Longitude:	107° 16' 50.819 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	7,441.0ft

Wellbore		Wellbore #1			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	6/10/2009	9.95	63.82	51,158

Design	Design #1				
Audit Notes:					
Version:	Phase:	PROTOTYPE		Tie On Depth:	0 0
Vertical Section:	Depth From (TVD)	+N-S	+E-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.1	0.0	7.14	

Survey Tool Program		Date 6/10/2009		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	8,222.8	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	2,178,222.83	1,339,347.58	
100.0	100.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58	
200.0	200.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58	
300.0	300.0	0.00	0.00	0.00	0 0	2,178,222.83	1,339,347.58	
400.0	400.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58	
500.0	500.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58	
600.0	600.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58	
700.0	700.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58	
800.0	800.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58	
900.0	900.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58	
1,000.0	1,000.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58	
1,100.0	1,100.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58	

Energen APD REPORT

Company: Energen Resources
Project: Carson National Forest
Site: 17B; Sec 17 T 32N 4W
Well: Carracas 17B #3
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well Carracas 17B #3
TVD Reference: WELL @ 7455.0ft (Original Well Elev)
MD Reference: WELL @ 7455.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
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	2,178,222.83	1,339,347.58
1,300.0	1,300.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58
1,400.0	1,400.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58
1,500.0	1,500.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58
1,600.0	1,600.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58
1,700.0	1,700.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58
1,800.0	1,800.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58
1,900.0	1,900.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58
2,000.0	2,000.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58
2,100.0	2,100.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58
2,200.0	2,200.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58
2,300.0	2,300.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58
2,400.0	2,400.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58
2,500.0	2,500.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58
2,600.0	2,600.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58
2,700.0	2,700.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58
2,800.0	2,800.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58
2,900.0	2,900.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58
3,000.0	3,000.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58
3,100.0	3,100.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58
3,200.0	3,200.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58
3,250.0	3,250.0	0.00	0.00	0.00	0.0	2,178,222.83	1,339,347.58
3,300.0	3,300.0	2.86	7.14	5.73	1.2	2,178,224.07	1,339,347.75
3,400.0	3,399.4	8.59	7.14	5.73	11.2	2,178,233.96	1,339,349.10
3,500.0	3,497.4	14.32	7.14	5.73	31.1	2,178,253.64	1,339,351.78
3,600.0	3,592.9	20.05	7.14	5.73	60.6	2,178,282.91	1,339,355.77
3,700.0	3,685.0	25.78	7.14	5.73	99.6	2,178,321.47	1,339,361.02
3,800.0	3,772.7	31.51	7.14	5.73	147.5	2,178,368.96	1,339,367.49
3,900.0	3,855.2	37.24	7.14	5.73	203.9	2,178,424.88	1,339,375.11
4,000.0	3,931.6	42.97	7.14	5.73	268.3	2,178,488.69	1,339,383.81
4,100.0	4,001.3	48.70	7.14	5.73	340.0	2,178,559.74	1,339,393.49
4,200.0	4,063.4	54.43	7.14	5.73	418.3	2,178,637.32	1,339,404.06
4,300.0	4,117.4	60.16	7.14	5.73	502.4	2,178,720.66	1,339,415.42
4,400.0	4,162.8	65.89	7.14	5.73	591.5	2,178,808.93	1,339,427.45
4,500.0	4,199.0	71.62	7.14	5.73	684.7	2,178,901.24	1,339,440.03
4,600.0	4,225.7	77.35	7.14	5.73	781.0	2,178,996.67	1,339,453.03
4,700.0	4,242.7	83.08	7.14	5.73	879.5	2,179,094.27	1,339,466.34
4,800.0	4,249.8	88.81	7.14	5.73	979.2	2,179,193.07	1,339,479.80
4,820.8	4,250.0	90.00	7.14	5.73	1,000.0	2,179,213.67	1,339,482.61
4,900.0	4,250.0	90.00	7.14	0.00	1,079.2	2,179,292.15	1,339,493.30
5,000.0	4,250.0	90.00	7.14	0.00	1,179.2	2,179,391.24	1,339,506.80
5,100.0	4,250.0	90.00	7.14	0.00	1,279.2	2,179,490.32	1,339,520.31
5,200.0	4,250.0	90.00	7.14	0.00	1,379.2	2,179,589.40	1,339,533.81
5,300.0	4,250.0	90.00	7.14	0.00	1,479.2	2,179,688.49	1,339,547.31

Energen APD REPORT

Company: Energen Resources
Project: Carson National Forest
Site: 17B; Sec. 17 T 32N 4W
Well: Carracas 17B #3
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well Carracas 17B #3
TVD Reference: WELL @ 7455.0ft (Original Well Elev)
MD Reference: WELL @ 7455 0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
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	4,250.0	90.00	7.14	0.00	1,579.2	2,179,787.57	1,339,560.81
5,500.0	4,250.0	90.00	7.14	0.00	1,679.2	2,179,886.66	1,339,574.32
5,600.0	4,250.0	90.00	7.14	0.00	1,779.2	2,179,985.74	1,339,587.82
5,700.0	4,250.0	90.00	7.14	0.00	1,879.2	2,180,084.82	1,339,601.32
5,800.0	4,250.0	90.00	7.14	0.00	1,979.2	2,180,183.91	1,339,614.82
5,900.0	4,250.0	90.00	7.14	0.00	2,079.2	2,180,282.99	1,339,628.33
6,000.0	4,250.0	90.00	7.14	0.00	2,179.2	2,180,382.08	1,339,641.83
6,100.0	4,250.0	90.00	7.14	0.00	2,279.2	2,180,481.16	1,339,655.33
6,200.0	4,250.0	90.00	7.14	0.00	2,379.2	2,180,580.24	1,339,668.84
6,300.0	4,250.0	90.00	7.14	0.00	2,479.2	2,180,679.33	1,339,682.34
6,400.0	4,250.0	90.00	7.14	0.00	2,579.2	2,180,778.41	1,339,695.84
6,500.0	4,250.0	90.00	7.14	0.00	2,679.2	2,180,877.50	1,339,709.34
6,600.0	4,250.0	90.00	7.14	0.00	2,779.2	2,180,976.58	1,339,722.85
6,700.0	4,250.0	90.00	7.14	0.00	2,879.2	2,181,075.66	1,339,736.35
6,800.0	4,250.0	90.00	7.14	0.00	2,979.2	2,181,174.75	1,339,749.85
6,900.0	4,250.0	90.00	7.14	0.00	3,079.2	2,181,273.83	1,339,763.35
7,000.0	4,250.0	90.00	7.14	0.00	3,179.2	2,181,372.92	1,339,776.86
7,100.0	4,250.0	90.00	7.14	0.00	3,279.2	2,181,472.00	1,339,790.36
7,200.0	4,250.0	90.00	7.14	0.00	3,379.2	2,181,571.08	1,339,803.86
7,300.0	4,250.0	90.00	7.14	0.00	3,479.2	2,181,670.17	1,339,817.36
7,400.0	4,250.0	90.00	7.14	0.00	3,579.2	2,181,769.25	1,339,830.87
7,500.0	4,250.0	90.00	7.14	0.00	3,679.2	2,181,868.34	1,339,844.37
7,600.0	4,250.0	90.00	7.14	0.00	3,779.2	2,181,967.42	1,339,857.87
7,700.0	4,250.0	90.00	7.14	0.00	3,879.2	2,182,066.50	1,339,871.37
7,800.0	4,250.0	90.00	7.14	0.00	3,979.2	2,182,165.59	1,339,884.88
7,900.0	4,250.0	90.00	7.14	0.00	4,079.2	2,182,264.67	1,339,898.38
8,000.0	4,250.0	90.00	7.14	0.00	4,179.2	2,182,363.76	1,339,911.88
8,100.0	4,250.0	90.00	7.14	0.00	4,279.2	2,182,462.84	1,339,925.39
8,200.0	4,250.0	90.00	7.14	0.00	4,379.2	2,182,561.92	1,339,938.89
8,222.8	4,250.0	90.00	7.14	0.00	4,402.1	2,182,584.56	1,339,941.97

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: 9.95°
 Magnetic Field
 Strength: 51157.7snT
 Dip Angle: 63.82°
 Date: 6/10/2009
 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	0.1	0.0	0.00	0.00	0.0	
2	3250.0	0.00	0.00	3250.0	0.1	0.0	0.00	0.00	0.0	
3	4820.8	90.00	7.14	4250.0	992.3	124.3	5.73	7.14	1000.0	
4	8222.8	90.00	7.14	4250.0	4368.0	547.2	0.00	0.00	4402.1	17B #3 BHL

True Vertical Depth (500 ft/in)

17B #3 BHL

Vertical Section at 7.14° (1500 ft/in)

West(-)/East(+) (1000 ft/in)

South(-)/North(+) (1000 ft/in)

17B #3 BHL