

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

JUN 01 2009

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

1. Type of Well ☐ Oil Well ☒ Gas Well ☐ Other		5. Lease Serial No. MM 28277
2. Name of Operator Energen Resources Corporation		6. If Indian, Allottee or Tribe Name
3a. Address 2010 Afton Place, Farmington, NM 87401	3b. Phone No. (include area code) (505) 325-6800	7. If Unit or CA/Agreement, Name and/or No
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) SHL: (P) Sec.17, T32N, R4W 59S'FSL & 2055'FEL BHL: (M) Sec.17, T32N, R4W 110'ENL & 110'FEL A		8. Well Name and No. Carracas 17B # 1
		9. API Well No. 30-039-30472
		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			
☒ 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 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 #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'ENL 110'FEL ✓

RCVD JUN 4 '09
OIL CONS. DIV.

Attached is a revised directional drilling and operations plan.

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

DIST. 3

Hold C104

for Directional Survey
and "As Drilled" platCONDITIONS 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. Solvers	Title Petroleum Engineer	Date 6/3/2009
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.	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

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' (MD)
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 1/4" wellbore will be drilled with a fresh water mud system.

The 8 3/4" 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 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 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 1/4"	9 5/8"	32.3 ppf	H-40 ST&C
Intermediate	0'-4187'(TVD) 4726' (MD)	8 3/4"	7"	23.0 ppf	J-55 LT&C
Production	4165'-4216' (TVD) 4500'-8806' (MD)	6 1/4"	4 1/2"	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 % 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 600 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 380 sks 65/35 with 6.0 % Bentonite, 2.0 % CaCl₂, 10 #/sk Gilsonite, and 1/2 #/sk Flocele (12.3 ppg, 1.96 ft³/sk) and a tail of 100 sks Type V with 1/4 #/sk Flocele (15.6 ppg, 1.18 ft³/sk). (862ft³ 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
From:	Lat/Long	Easting:	1,340,707.36 ft
Position Uncertainty:	0 0 ft	Slot Radius:	"
		Latitude:	36° 58' 51 672 N
		Longitude:	107° 16' 34.032 W
		Grid Convergence:	-0 62 °

Well	Carracas 17B #1		
Well Position	+N/-S	0 0 ft	Northing: 2,178,001 10 ft
	+E/-W	0 0 ft	Easting: 1,340,707 36 ft
Position Uncertainty		0 0 ft	Wellhead Elevation: ft
			Latitude: 36° 58' 51 672 N
			Longitude: 107° 16' 34 032 W
			Ground Level: 7,366 0 ft

Wellbore	Wellbore #1		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	5/12/2009	9 96	63 82	51,166

Design	Design #1		
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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 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: _____
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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

T 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

