

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM 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.

2006 MAR 20 PM 3 54

SUBMIT IN TRIPLICATE - Other instructions on reverse side

RECEIVED

070 FARMINGTON NM

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

2. Name of Operator

Energen Resources Corporation

3a. Address

2198 Bloomfield Highway, Farmington, NM 87401

3b. Phone No. (include area code)

505.325.6800

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

920' FSL, 810' FWL SW/4

(M) S21, T32N, R4W

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

8. Well Name and No.

Carracas 21B #13

9. API Well No.

30-039-24420

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 recompleate 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 recompleation 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 proposes a recompleation of the Carracas 21B #13 in the Basin Fruitland Coal by drilling a horizontal lateral off the existing vertical wellbore as indicated on the attached C-102 and directional wellplan. A whipstock will be set at 4010' +/- (TVD) and a window milled in the existing 5 1/2" casing. The lateral will be drilled to 6093' (MD), 4217' (TVD). This will be an open hole completion. 2 3/8" tubing will be landed at 4210' (TVD) in the 5 1/2" casing.

CONDITIONS OF APPROVAL

Adhere to previously issued stipulations.

CONDITIONS OF APPROVAL

Adhere to previously issued stipulations.

HOLD C104 FOR directional survey14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Nathan Smith

Title

Drilling Engineer

Date 3/20/06

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Matt Holbert

Title

PETR ENG

Date

3/23/06

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

BLM-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.

NMOCU

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

Form C-102
Revised August 15, 2000

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number		*Pool Code	*Pool Name BASIN FRUITLAND COAL
*Property Code	*Property Name CARRACAS 21 B		*Well Number 13
*OGRID No.	*Operator Name ENERGEN RESOURCES CORPORATION		*Elevation 7396'

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
M	21	32N	4W		920'	SOUTH	810'	WEST	RIO ARriba

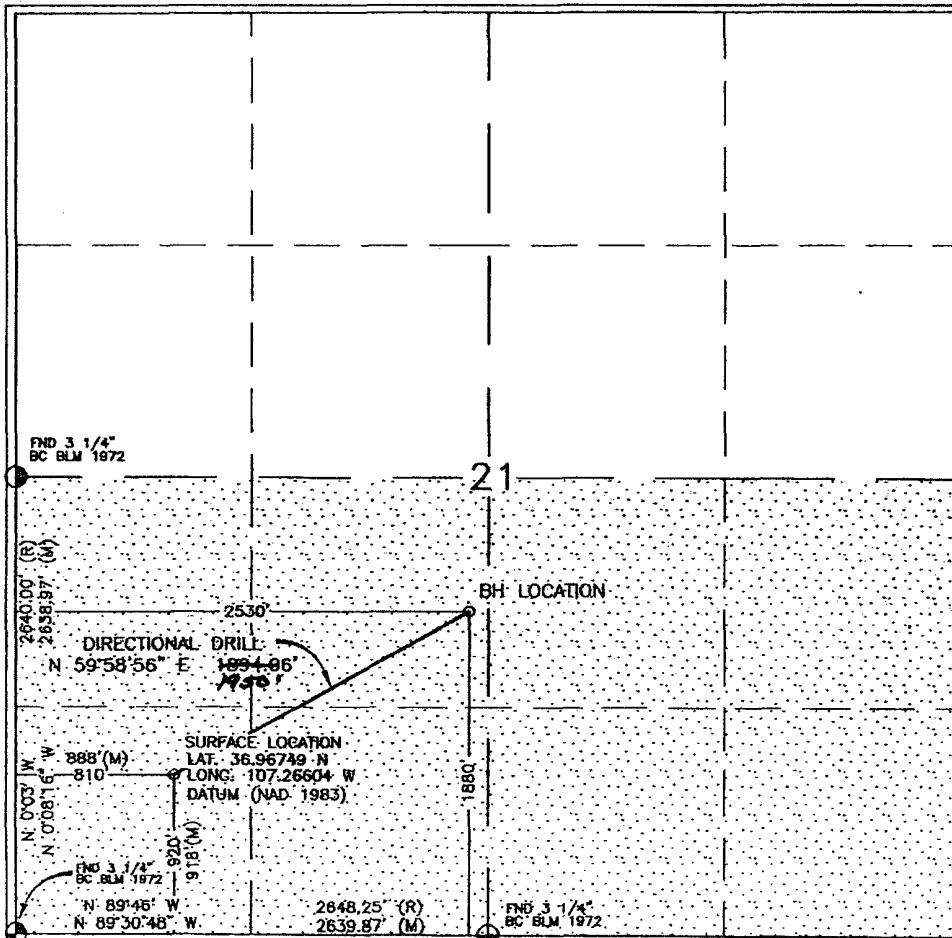
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	21	32N	4W		1880'	SOUTH	2530'	WEST	RIO ARriba

¹² Dedicated Acres 320.92 Acres - (S/2)		¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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

16



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
3/13/06
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.

FEBRUARY 17, 2006

Date of Survey
Signature and Seal of Professional Surveyor:

DAVID A. RUSSELL
Certificate Number 10201



Energen Resources Corporation

Rio Arriba, NM

Sec.21 T32N-R4W

Carracas 21B-13ST

Wellbore #1

Plan: Plan #1

Standard Planning Report

13 March, 2006

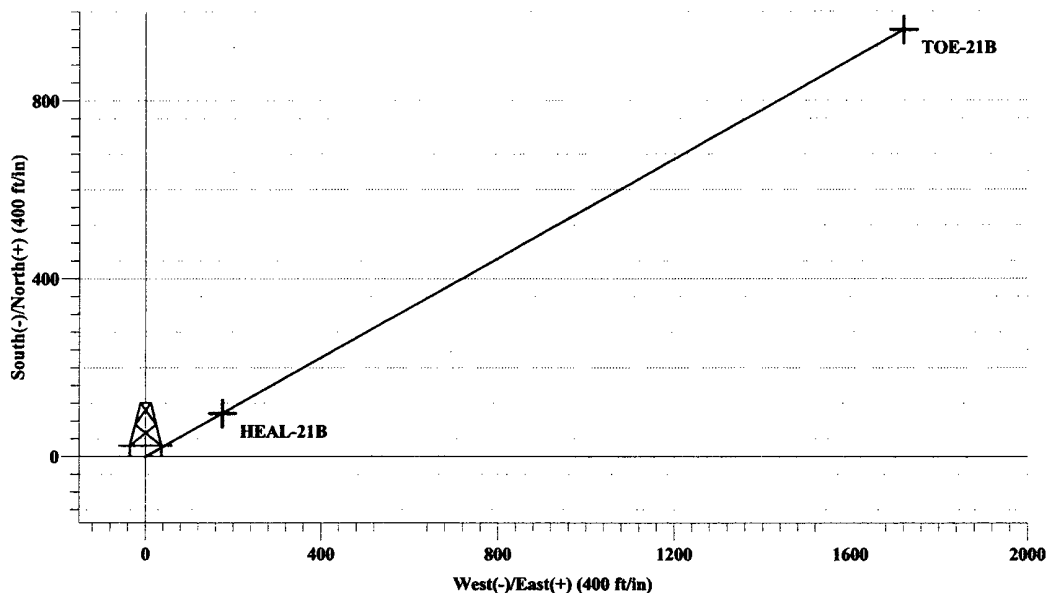


Azimuths to Grid North
 M True North: 0.61°
 Magnetic North: 10.96°
 Magnetic Field
 Strength: 51522.5nT
 Dip Angle: 63.88°
 Date: 3/13/2006
 Model: IGRF200510

Energren Resources Corp.

Carracas 21B-13ST
 Sec.21 T32N-R4W
 RIO ARRIBA Co., NM

PATHFINDER
 ENERGY SERVICES

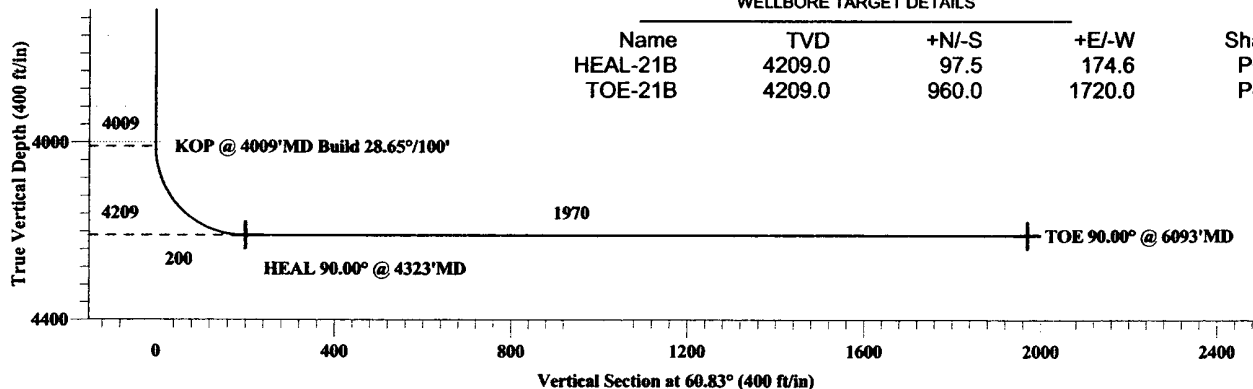


SURFACE LOCATION: Carracas 21B-13ST

920'FSL 810'FWL

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
HEAL-21B	4209.0	97.5	174.6	Point
TOE-21B	4209.0	960.0	1720.0	Point



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	4009.0	0.00	0.00	4009.0	0.0	0.0	0.00	0.00	0.0	
3	4323.2	90.00	60.83	4209.0	97.5	174.6	28.65	60.83	200.0	HEAL-21B
4	6092.9	90.00	60.83	4209.0	960.1	1720.0	0.00	0.00	1969.8	TOE-21B

Plan: Plan #1 (Carracas 21B-13ST/Wellbore #1)

Created By: Frank C. Scardino Date: 3/13/2006

Database: EDM 2003.14 Single User Db
Company: Energen Resources Corporation
Project: Rio Arriba, NM
Site: Sec.21 T32N-R4W
Well: Carracas 21B-13ST
Wellbore: Wellbore #1
Design: Plan #1

Local Co-ordinate Reference: Well Carracas 21B-13ST
TVD Reference: WELL @ 0.0ft (Original Well Elev)
MD Reference: WELL @ 0.0ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Rio Arriba, NM		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Central Zone		

Site	Sec.21 T32N-R4W		
Site Position:		Northing:	2,173,043.57 ft
From:	Lat/Long	Easting:	1,343,599.07 ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	36° 58' 2.964 N
		Longitude:	107° 15' 57.744 W
		Grid Convergence:	-0.61 °

Well	Carracas 21B-13ST		
Well Position	+N/-S	0.0 ft	Northing: 2,173,043.57 ft
	+E/-W	0.0 ft	Easting: 1,343,599.07 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	36° 58' 2.964 N
		Longitude:	107° 15' 57.744 W
		Ground Level:	0.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF200510	3/13/2006	10.35	63.88	51,522

Design	Plan #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	0.0	0.0	60.83

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(ft)	(ft)	Rate	Rate	Rate	(°)	
(ft)			(ft)			(°/100ft)	(°/100ft)	(°/100ft)		
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,009.0	0.00	0.00	4,009.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,323.2	90.00	60.83	4,209.0	97.5	174.6	28.65	28.65	0.00	60.83	HEAL-21B
6,092.9	90.00	60.83	4,209.0	960.1	1,720.0	0.00	0.00	0.00	0.00	TOE-21B

Database: EDM 2003.14 Single User Db
 Company: Energen Resources Corporation
 Project: Rio Arriba, NM
 Site: Sec.21 T32N-R4W
 Well: Carracas 21B-13ST
 Wellbore: Wellbore #1
 Design: Plan #1

Local Co-ordinate Reference: Well Carracas 21B-13ST
 TVD Reference: WELL @ 0.0ft (Original Well Elev)
 MD Reference: WELL @ 0.0ft (Original Well Elev)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,009.0	0.00	0.00	4,009.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP @ 4009' MD Build 28.65°/100'									
4,020.0	3.15	60.83	4,020.0	0.1	0.3	0.3	28.65	28.65	0.00
4,040.0	8.88	60.83	4,039.9	1.2	2.1	2.4	28.65	28.65	0.00
4,060.0	14.61	60.83	4,059.4	3.2	5.6	6.5	28.65	28.65	0.00
4,080.0	20.34	60.83	4,078.5	6.1	10.9	12.5	28.65	28.65	0.00
4,100.0	26.07	60.83	4,096.9	9.9	17.8	20.3	28.65	28.65	0.00
4,120.0	31.80	60.83	4,114.4	14.6	26.2	30.0	28.65	28.65	0.00
4,140.0	37.53	60.83	4,130.8	20.2	36.1	41.4	28.65	28.65	0.00
4,160.0	43.26	60.83	4,146.1	26.5	47.5	54.3	28.65	28.65	0.00
4,180.0	48.99	60.83	4,159.9	33.5	60.0	68.8	28.65	28.65	0.00
4,200.0	54.72	60.83	4,172.3	41.2	73.8	84.5	28.65	28.65	0.00
4,220.0	60.45	60.83	4,183.0	49.4	88.5	101.4	28.65	28.65	0.00
4,240.0	66.18	60.83	4,192.0	58.1	104.1	119.2	28.65	28.65	0.00
4,260.0	71.91	60.83	4,199.1	67.2	120.4	137.9	28.65	28.65	0.00
4,280.0	77.64	60.83	4,204.4	76.6	137.2	157.2	28.65	28.65	0.00
4,300.0	83.37	60.83	4,207.7	86.2	154.5	176.9	28.65	28.65	0.00
4,320.0	89.09	60.83	4,209.0	95.9	171.9	196.8	28.65	28.65	0.00
4,323.2	90.00	60.83	4,209.0	97.5	174.6	200.0	28.65	28.65	0.00
HEAL 90.00° @ 4323' MD - HEAL-21B									
4,400.0	90.00	60.83	4,209.0	134.9	241.7	276.8	0.00	0.00	0.00
4,500.0	90.00	60.83	4,209.0	183.7	329.0	376.8	0.00	0.00	0.00
4,600.0	90.00	60.83	4,209.0	232.4	416.4	476.8	0.00	0.00	0.00
4,700.0	90.00	60.83	4,209.0	281.2	503.7	576.8	0.00	0.00	0.00
4,800.0	90.00	60.83	4,209.0	329.9	591.0	676.8	0.00	0.00	0.00
4,900.0	90.00	60.83	4,209.0	378.6	678.3	776.8	0.00	0.00	0.00
5,000.0	90.00	60.83	4,209.0	427.4	765.6	876.8	0.00	0.00	0.00
5,100.0	90.00	60.83	4,209.0	476.1	853.0	976.8	0.00	0.00	0.00
5,200.0	90.00	60.83	4,209.0	524.9	940.3	1,076.8	0.00	0.00	0.00
5,300.0	90.00	60.83	4,209.0	573.6	1,027.6	1,176.8	0.00	0.00	0.00
5,400.0	90.00	60.83	4,209.0	622.3	1,114.9	1,276.8	0.00	0.00	0.00
5,500.0	90.00	60.83	4,209.0	671.1	1,202.2	1,376.8	0.00	0.00	0.00
5,600.0	90.00	60.83	4,209.0	719.8	1,289.5	1,476.8	0.00	0.00	0.00
5,700.0	90.00	60.83	4,209.0	768.6	1,376.9	1,576.8	0.00	0.00	0.00
5,800.0	90.00	60.83	4,209.0	817.3	1,464.2	1,676.8	0.00	0.00	0.00
5,900.0	90.00	60.83	4,209.0	866.0	1,551.5	1,776.8	0.00	0.00	0.00
6,000.0	90.00	60.83	4,209.0	914.8	1,638.8	1,876.8	0.00	0.00	0.00
6,092.8	90.00	60.83	4,209.0	960.0	1,719.8	1,969.6	0.00	0.00	0.00
TOE 90.00° @ 6093' MD									
6,092.9	90.00	60.83	4,209.0	960.1	1,720.0	1,969.8	0.00	0.00	0.00
TOE-21B									

Database: EDM 2003.14 Single User Db
Company: Energen Resources Corporation
Project: Rio Arriba, NM
Site: Sec.21 T32N-R4W
Well: Carracas 21B-13ST
Wellbore: Wellbore #1
Design: Plan #1

Local Co-ordinate Reference: Well Carracas 21B-13ST
TVD Reference: WELL @ 0.0ft (Original Well Elev)
MD Reference: WELL @ 0.0ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
TOE-21B	0.00	2.73	4,209.0	960.0	1,720.0	2,174,003.57	1,345,319.07	36° 58' 12.636 N	107° 15' 36.677 W
- plan hits target									
- Point									
HEAL-21B	0.00	2.73	4,209.0	97.5	174.6	2,173,141.05	1,343,773.70	36° 58' 3.946 N	107° 15' 55.605 W
- plan hits target									
- Point									

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
4,009.0	4,009.0	0.0	0.0	KOP @ 4009' MD Build 28.65°/100'
4,323.2	4,209.0	97.5	174.6	HEAL 90.00° @ 4323' MD
6,092.8	4,209.0	960.0	1,719.8	TOE 90.00° @ 6093' MD

Bureau of Land Management Conditions of Approval:

- 1) If cement squeeze work is necessary, contact Matt Halbert of the BLM Farmington Field Office @ (505) 599-6350.**
- 2) Pits must be lined with an impervious material at least 12 mils thick. The pit must be fenced on three (3) sides during workover operations and on the 4th side after the rig moves off location. Pits must be closed within 90 days of completion of the workover operations. Prior to closing the pit the liner must be cut off at mud level.**