

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB NO. 1004-0136  
Expires: November 30, 2000

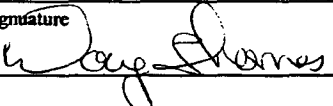
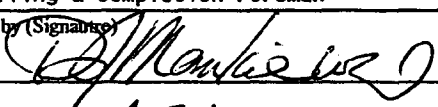
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMSF 079483 A
1b. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator Energen Resources Corporation		7. Unit or CA Agreement Name and No.
3a. Address 2198 Bloomfield Highway Farmington, New Mexico 87401	3b. Phone No. (include area code) (505)325-6800	8. Lease Name and Well No. Carson 2005
4. Location of Well (Report location clearly and in accordance with any State requirements)* At surface 1820' FNL, 685' FWL At proposed prod. zone		9. API Well No. 3003927589
14. Distance in miles and direction from nearest town or post office* 28 miles NE of Gobernador, NM		10. Field and Pool, or Exploratory Basin Fruitland Coal
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) 685'	16. No. of Acres in lease 1178.30	11. Sec., T., R., M., or Blk. and Survey or Area F-Sec.07. T30N. R04W. N.M.P.M.
17. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1450'	18. Proposed Depth 3542'	12. County or Parish Rio Arriba
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6782'	22. Approximate date work will start* 08/04	13. State NM
23. Estimated duration 6 Days		

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- |   |  |
|---|--|
| 1. Well plat certified by a registered surveyor.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan  | 5. Operator certification.   |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature 	Name (Printed/Typed) Doug Thomas	Date 01/22/04
Title Drilling & Completion Foreman		
Approved by (Signature) 	Name (Printed/Typed) AFM	Date 8-15-05
Title FFO		

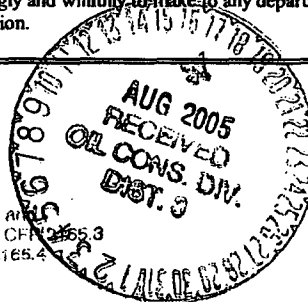
Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make 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.

\*(Instructions on Reverse)

DRILLING OPERATIONS AUTHORIZED ARE  
SUBJECT TO COMPLIANCE WITH ATTACHED  
"GENERAL REQUIREMENTS".

This action is subject to technical and  
procedural review pursuant to 43 CFR 255.3  
and appeal pursuant to 43 CFR 3165.4



NMOC

District I  
PO Box 1980, Hobbs, NM 88241-1980

District II  
PO Drawer 00, Artesia, NM 88211-0719

District III  
1000 Rio Brazos Rd., Aztec, NM 87410

District IV  
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

Form C-102  
Revised February 21, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-27589		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 21185	*Property Name CARSON		*Well Number 200S
*OGRID No. 162928	*Operator Name ENERGEN RESOURCES CORPORATION		*Elevation 6782'

<sup>10</sup> Surface Location

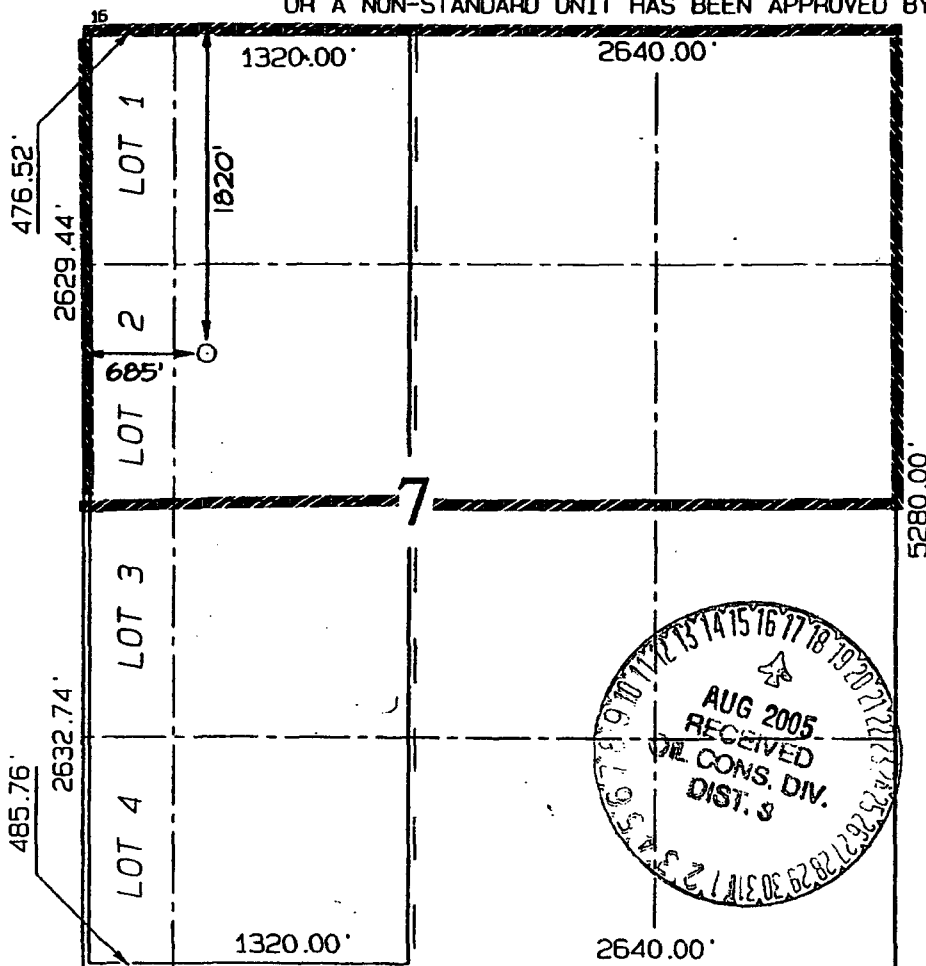
UL or lot no. F	Section 7	Township 30N	Range 4W	Lot Idn	Feet from the 1820	North/South line NORTH	Feet from the 685	East/West line WEST	County RIO ARriba
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<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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<sup>12</sup> Dedicated Acres 269.01 N 2 248.30 Acres = W/2					<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
--	--	--	--	--	-------------------------------	----------------------------------	-------------------------

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



<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

*Don Graham*  
Signature

Don Graham

Printed Name

Production Superintendent

Title

1-15-04

Date

<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.

Date of Survey: APRIL 24, 2003

Signature and Seal of Professional Surveyor



*Jason C. Edwards*  
Certificate Number 15269

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM 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.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

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)

745' fnl, 1345' fel at surface (A S7, T30N, R4W)

760' fnl, 760' fw1 at bottom (D S7, T30N, R4W)

5. Lease Serial No.

NMSP 079483 A

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.

Carson 200S

9. API Well No.

30-039-27589

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 would like to make the following changes to the Carson #200S:

\* Move from the APD approved new well pad site, twin the existing Carson #200 well pad, and directionally/horizontally drill to the drill block window of the Carson #200S.

\* Change the surface/bottom hole location from 1820' fnl, 685' fw1 to a new surface hole location of 745' fnl, 1345' fel in UL A and new bottom hole location of 760' fnl, 760' fw1 in UL D.

\* Change the setting depth of the 7" casing string to 3996' (TVD), 4750' (MD) and cement to surface with 650 sks 65/35 lead (1274 cuft) and tail with 125 sks class B (155 cuft).

\* Change the uncemented production liner to a 4 1/2" 11.6 ppf J-55 LT&C pre-drilled liner with setting depths of 3981'-3996' (TVD), 4700'-5796' (MD).

Information and indications attached on a revised C-102, Operations Plan, and Directional Drill Plan.

14. I hereby certify that the foregoing is true and correct

Name (Printed/Typed)

Nathan Smith

Title

Drilling Engineer

Date 2/22/06

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Brian Jones

Title

EPS

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.

HOLD C104 FOR

Directional survey

NMUCD

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

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C--102  
Revised August 15, 2000

DISTRICT II  
611 South First, Artesia, N.M. 88210

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

DISTRICT IV  
2040 South Pacheco, Santa Fe, NM 87505

OIL CONSERVATION DIVISION

2040 South Pacheco  
Santa Fe, NM 87505

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

RECEIVED  
OIL CONSERVATION DIVISION  
AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code	*Property Name CARSON		*Well Number 2005
*OILRD No. 162928	*Operator Name ENERGEN RESOURCES CORPORATION		*Elevation 7233'

10 Surface Location

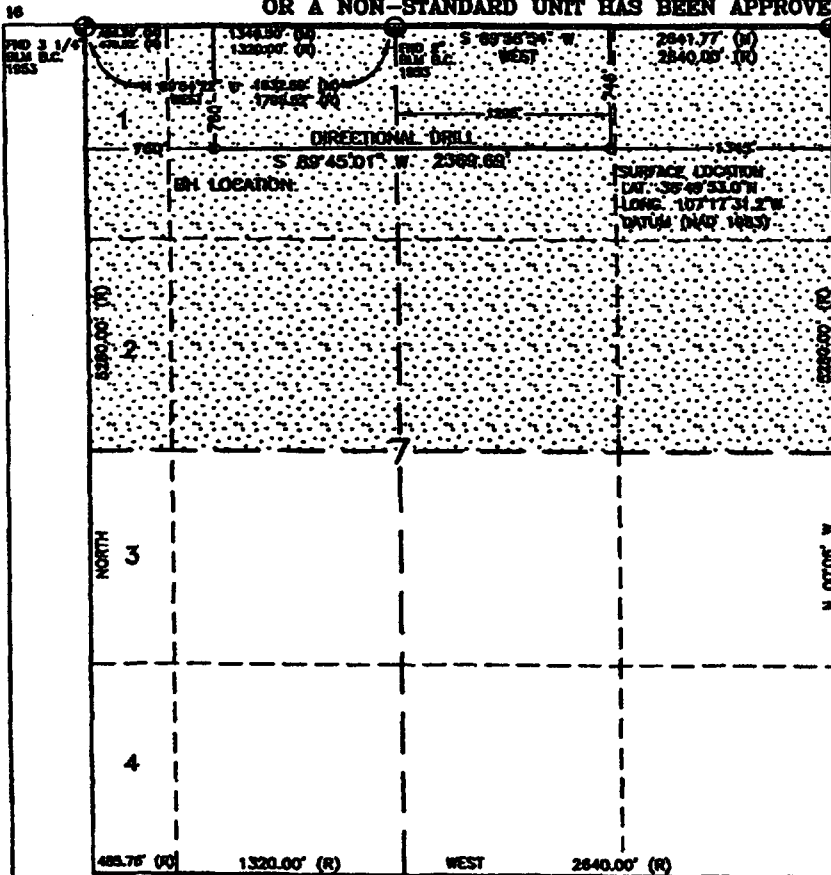
UL or lot no.	Section	Township	Range	Lot 1/4	Feet from the	North/South Line	Feet from the	East/West Line	County
B	7	30N	4W		745'	NORTH	1345'	EAST	RIO ARriba

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot 1/4	Feet from the	North/South Line	Feet from the	East/West Line	County
D	7	30N	4W		760'	NORTH	760'	WEST	RIO ARriba

*Dedicated Acres 271.20 Acres - (N/2)	*Total or Infill	*Consolidation Code	*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



17 OPERATOR CERTIFICATION

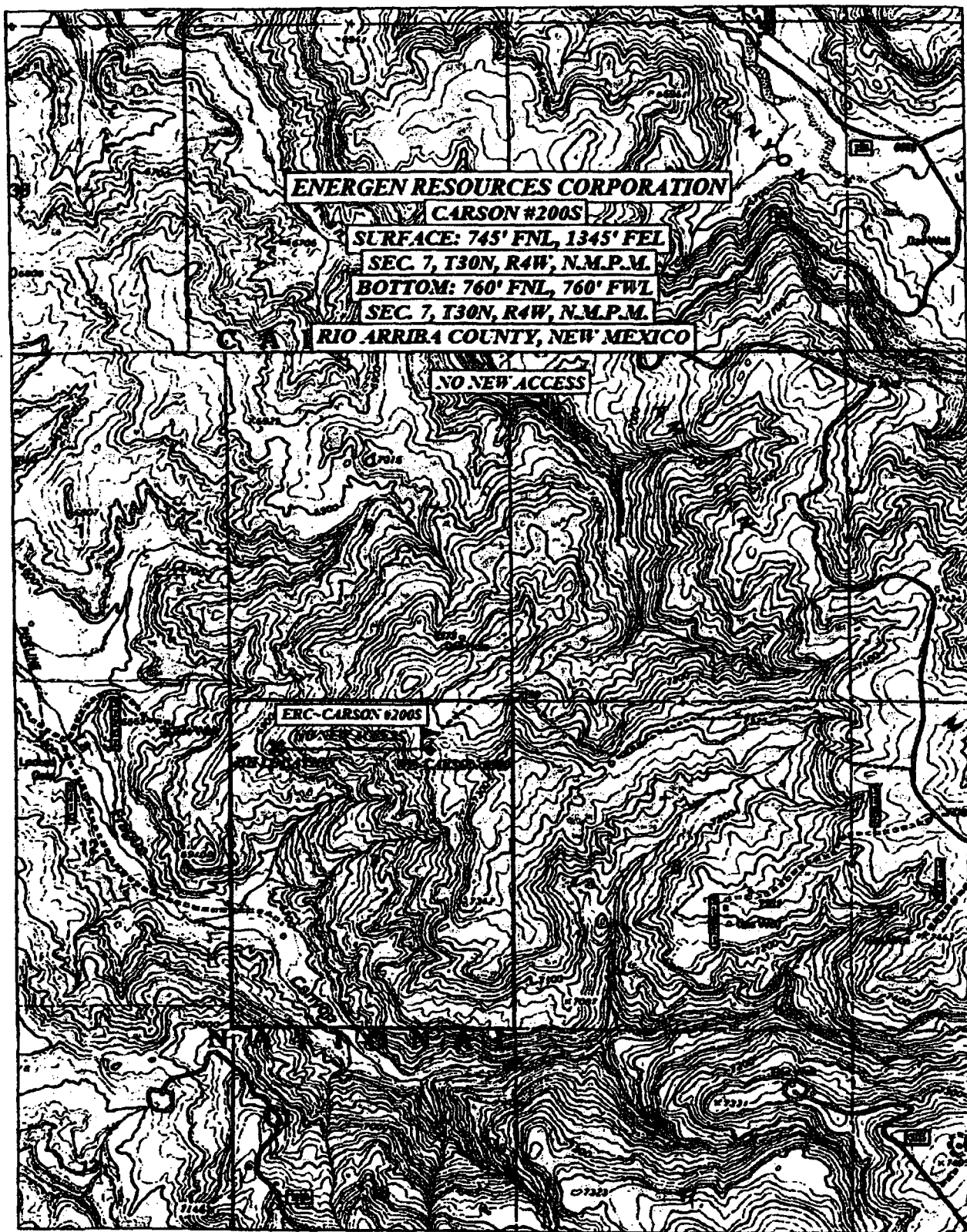
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

*Nathan Smith*  
Signature  
Nathan Smith  
Printed Name  
Drilling Engineer  
Title  
2/15/06  
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.

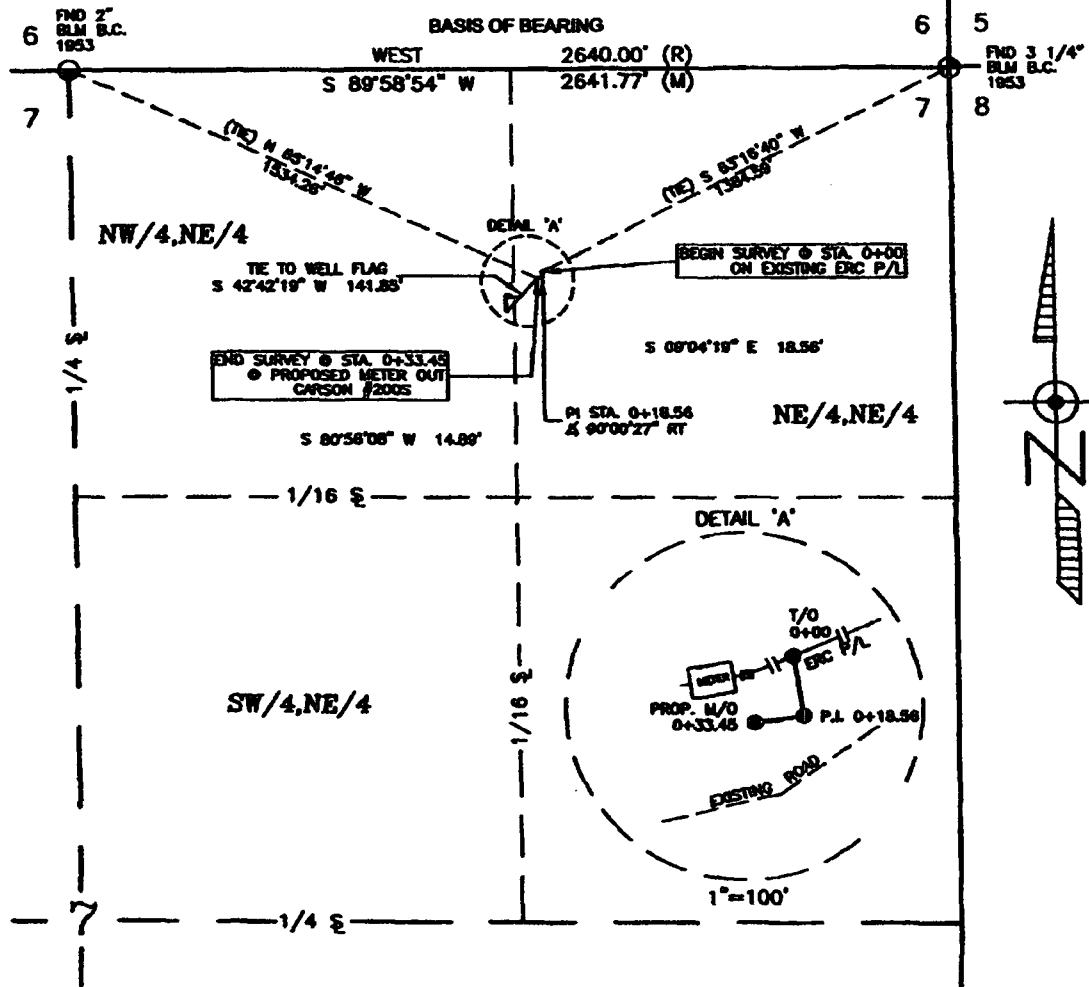
NOVEMBER 23, 2005  
Date  
Nathan Smith  
Registered and Licensed Professional Surveyor:  
*Nathan Smith*  
Signature  
NATHAN SMITH  
Printed Name  
Certificate Number 10201



Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com topo)

A PROPOSED PIPELINE SURVEY  
FOR  
**ENERGEN RESOURCES CORPORATION**  
**CARSON #200S**

LOCATED IN THE  
NE/4, NE/4 SECTION 7, T30N, R4W, N.M.P.M.  
RIO ARriba COUNTY, NEW MEXICO



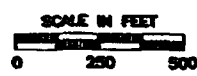
**NOTES:**

- 1) BASIS OF BEARING: BETWEEN FIXED INTERSECTIONS AT THE CORNER OF SECTION 7 AND THE WEST BOUNDARY LINE OF SECTION 7, CORNER 7, RANGE 4 WEST, T30N, R4W, N.M.P.M. THE BEARING IS 89°58'54" W. THE DISTANCE IS 2641.77 FEET AS MEASURED BY GPS.
- 2) LOCATION OF UNDERGROUND UTILITY: THE LOCATION OF ALL UNDERGROUND UTILITIES WAS DETERMINED BY GROUND PENETRATING RADAR (GPR) SURVEYING. THE RESULTS OF THE GPR SURVEY ARE SHOWN ON THIS PLAN. THE RESULTS OF THE GPR SURVEY ARE SHOWN ON THIS PLAN. THE RESULTS OF THE GPR SURVEY ARE SHOWN ON THIS PLAN.

I, DAVID R. RUSSELL, A NEW MEXICO REGISTERED LAND SURVEYOR, CERTIFY THAT I CONDUCTED AND AM RESPONSIBLE FOR THE SURVEY. THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAN MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

*David R. Russell*  
DAVID R. RUSSELL, PLS  
NEW MEXICO LS #10201

<b>SURVEY OVERSIGHT</b>	
CARSON NATIONAL FOREST	
0+00 TO 0+33.45	0+00
33.45 FT / 2.03 RODS	0+33.45
DATE OF BEARING: 11/28/05	DATE: 12/13/05



**Russell Surveying, Inc.**  
Specializing in Oil field Surveying  
1409 W. Aztec Blvd. #5, Aztec, N.M. 87410  
Phone (505) 334-8637 Fax (505) 334-8637  
REGISTERED LAND SURVEYOR  
NEW MEXICO LS #10201

**Drilling Plan**  
Revised February 22, 2006

**Carson #200S**

**General Information**

Location	745' fnl, 1345' fel at surface hole 760' fnl, 760' fwl at bottom hole nwnw S7, T30N, R04W Rio Arriba County, New Mexico
Elevations	7233' GL
Total Depth	3996' (TVD), 5796' (MD)
Formation Objective	Basin Fruitland Coal

**Formation Tops**

San Jose	Surface
Nacimiento	2060' (TVD)
Ojo Alamo Ss	3360' (TVD), 3400' (MD)
Kirtland Sh	3560' (TVD), 3640' (MD)
Fruitland Fm	3910' (TVD), 4250' (MD)
Top Coal	3981' (TVD), 4490' (MD)
Bottom Coal	3996' (TVD)
Total Depth	3996' (TVD), 5796' (MD)
Pictured Cliffs Ss	4040'

**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 8.3 ppg to 8.9 ppg. Kick off point is at 2704' (TVD).

The 6 1/4" wellbore will be drilled with a fresh water or brine water system depending on reservoir characteristics.

**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: MWD gamma ray

Mud logs: From kick off point to TD

Natural Gauges: Surface and/or as needed for directional drilling

## 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	200'-3996' (TVD) 4750' (MD)	8 3/4"	7"	23.0 ppf	J-55 LT&C
Production	3981'-3996' (TVD) 4700'-5796' (MD)	6 1/4"	4 1/2"	11.6 ppf	J-55 LT&C
Tubing	0'-4650'		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.

## Wellhead

11" x 9 5/8" 3000 psi Casing Head. 11" x 7 1/16" 3000 psi Christmas Tree.

## Cementing

Surface Casing: 125 sks Std (class B) with 1.0 % CaCl<sub>2</sub> and 1/4 #/sk Flocele (15.6 ppg, 1.18 ft<sup>3</sup>/sk 147.5 ft<sup>3</sup> 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 650 sks 65/35 with 6.0 % Bentonite, 2.0 % CaCl<sub>2</sub>, 10 #/sk Gilsonite, and 1/2 #/sk Flocele (12.3 ppg, 1.96 ft<sup>3</sup>/sk) and a tail of 125 sks of Standard (Class B) cement with 5 #/sk Gilsonite, and 1/4 #/sk Flocele (15.2 ppg, 1.24 ft<sup>3</sup>/sk). (1432 ft<sup>3</sup> of slurry, 100 % excess to circulate to surface). WOC 12 hrs. Test casing to 1200 psi for 30 min.

Liner: NO CEMENT

## Other Information

- 1) This well will be an open hole completion.
- 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 are anticipated, however reservoir pressures may be 1200 psi.
- 5) This gas is dedicated.





## **Energen Resources Corporation**

**Rio Arriba, NM  
Sec.7 T30N-R4W  
CARSON 200S  
Wellbore #1**

**Plan: Plan #1**

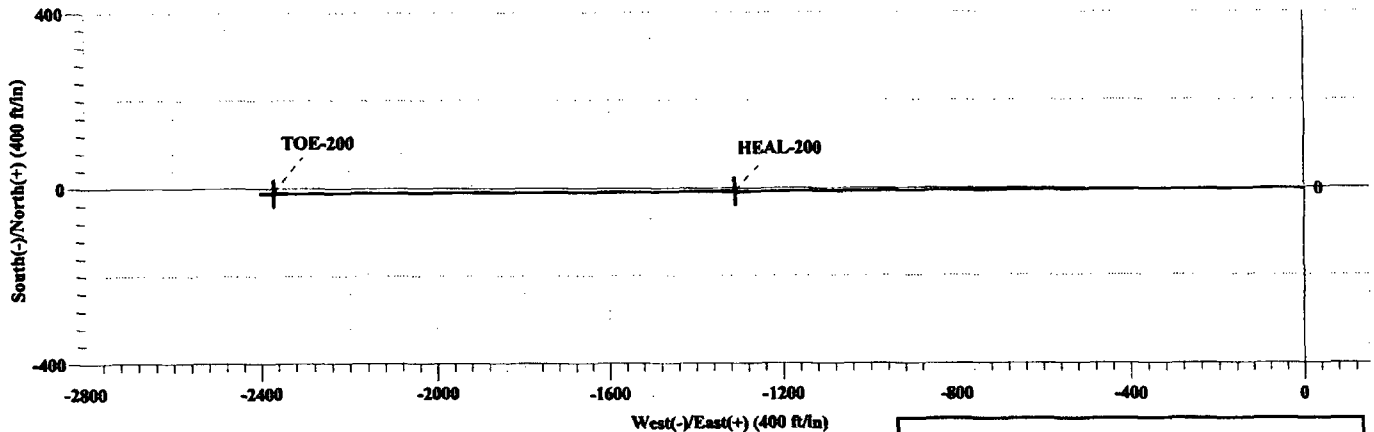
## **Standard Planning Report**

**22 February, 2006**

# Energen Resources Corp

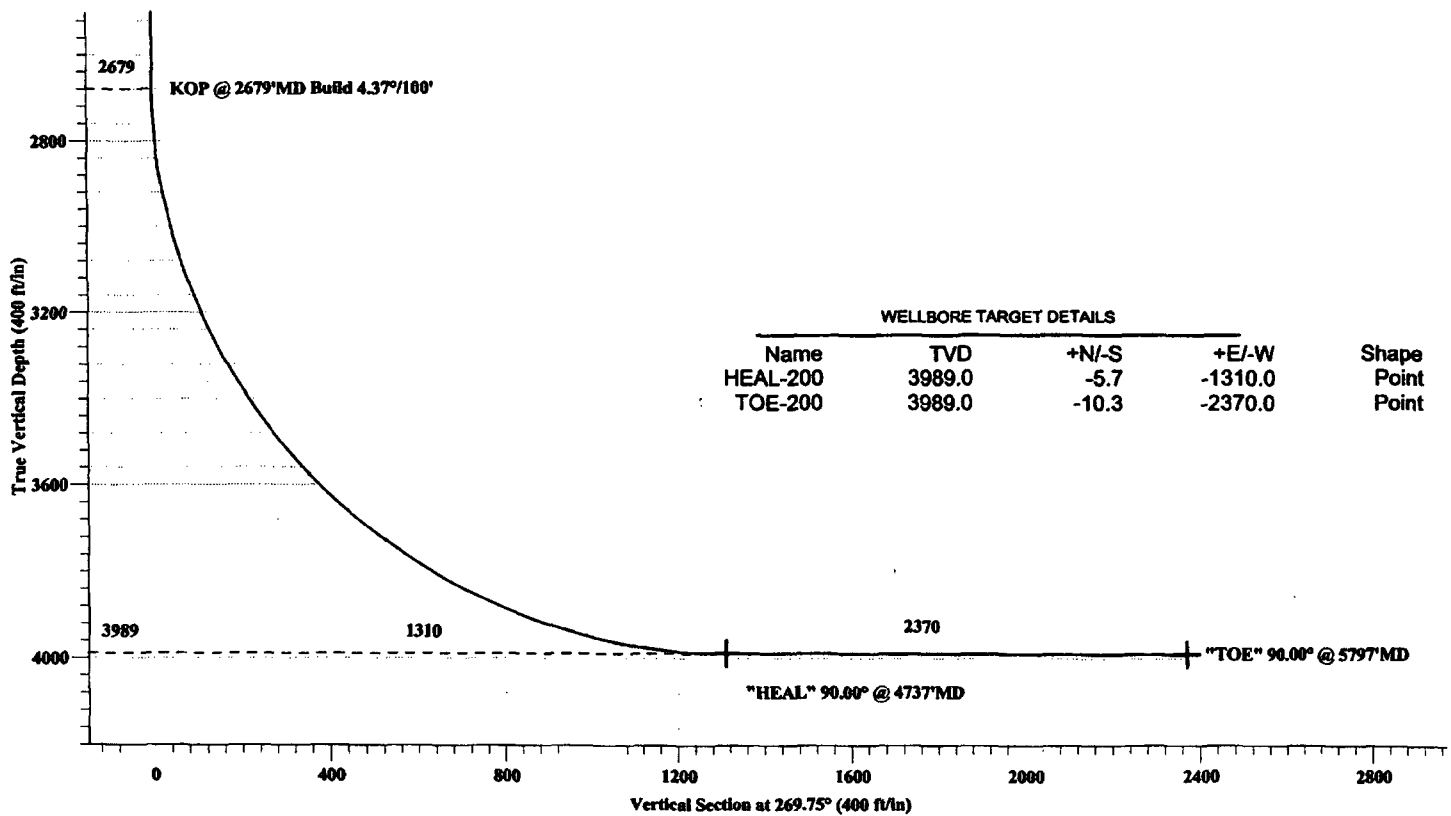


CARSON 200S  
Sec.7 T30N-R4W  
Rio Arriba, NM



SURFACE LOCATION: Sec.7 T30N-R4W

745°FNL 1345°FEL



## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
HEAL-200	3989.0	-5.7	-1310.0	Point
TOE-200	3989.0	-10.3	-2370.0	Point

## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.0	
2	2679.0	0.00		2679.0	0.0	0.0	0.00	0.0	
3	4736.7	90.00	269.75	3989.0	-5.7	-1310.0	4.37	269.75	HEAL-200
4	5796.7	90.00	269.75	3989.0	-10.3	-2370.0	0.00	0.00	TOE-200

Plan: Plan #1 (CARSON 200S/Wellbore #1)

Created By: Frank C. Scardino Date: 1/5/2006

Database: EDM 2003.14 Single User Db  
 Company: Energen Resources Corporation  
 Project: Rio Arriba, NM  
 Site: Sec.7 T30N-R4W  
 Well: CARSON 200S  
 Wellbore: Wellbore #1  
 Design: Plan #1

Local Co-ordinate Reference: Well CARSON 200S  
 TVD Reference: WELL @ 0.0ft (Original Well Elev)  
 MD Reference: WELL @ 0.0ft (Original Well Elev)  
 North Reference: True  
 Survey Calculation Method: Minimum Curvature

Project	Rio Arriba, NM		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico Central 3002		

Site	Sec.7 T30N-R4W		
Site Position:		Northing:	-11,254,725.68 ft
From:	Lat/Long	Easting:	81,174,934.82 ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	
		Longitude:	
		Grid Convergence:	0.01 °

Well	CARSON 200S		
Well Position	+N/-S	0.0 ft	Northing: -11,254,725.68 ft
	+E/-W	0.0 ft	Easting: 81,174,934.82 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	0° 0' 0.000 N
		Longitude:	1614° 28' 50.676 E
		Ground Level:	0.0 ft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
	IGRF2005	12/31/2004	(°)
			Dip Angle
			(°)
			Field Strength
			(nT)

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	Direction
	(ft)	(ft)	(°)
	0.0	0.0	269.75

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,679.0	0.00	0.00	2,679.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,736.7	90.00	269.75	3,989.0	-5.7	-1,310.0	4.37	4.37	0.00	269.75	HEAL-200
5,796.7	90.00	269.75	3,989.0	-10.3	-2,370.0	0.00	0.00	0.00	0.00	TOE-200

Database: EDM 2003.14 Single User Db  
 Company: Energen Resources Corporation  
 Project: Rio Arriba, NM  
 Site: Sec.7 T30N-R4W  
 Well: CARSON 200S  
 Wellbore: Wellbore #1  
 Design: Plan #1

Local Co-ordinate Reference: Well CARSON 200S  
 TVD Reference: WELL @ 0.0ft (Original Well Elev)  
 MD Reference: WELL @ 0.0ft (Original Well Elev)  
 North Reference: True  
 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)
2,679.0	0.00	0.00	2,679.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>KOP @ 2679'MD Build 4.37°/100'</b>									
2,700.0	0.92	269.75	2,700.0	0.0	-0.2	0.2	4.37	4.37	0.00
2,800.0	5.29	269.75	2,799.8	0.0	-5.6	5.6	4.37	4.37	0.00
2,900.0	9.67	269.75	2,899.0	-0.1	-18.6	18.6	4.37	4.37	0.00
3,000.0	14.04	269.75	2,996.8	-0.2	-39.1	39.1	4.37	4.37	0.00
3,100.0	18.41	269.75	3,092.8	-0.3	-67.1	67.1	4.37	4.37	0.00
3,200.0	22.79	269.75	3,186.4	-0.4	-102.2	102.2	4.37	4.37	0.00
3,300.0	27.16	269.75	3,277.0	-0.6	-144.5	144.5	4.37	4.37	0.00
3,400.0	31.53	269.75	3,364.1	-0.8	-193.5	193.5	4.37	4.37	0.00
3,500.0	35.91	269.75	3,447.3	-1.1	-249.0	249.0	4.37	4.37	0.00
3,600.0	40.28	269.75	3,526.0	-1.4	-310.6	310.6	4.37	4.37	0.00
3,700.0	44.66	269.75	3,599.7	-1.6	-378.1	378.1	4.37	4.37	0.00
3,800.0	49.03	269.75	3,668.1	-2.0	-451.1	451.1	4.37	4.37	0.00
3,900.0	53.40	269.75	3,730.7	-2.3	-529.0	529.0	4.37	4.37	0.00
4,000.0	57.78	269.75	3,787.2	-2.7	-611.5	611.5	4.37	4.37	0.00
4,100.0	62.15	269.75	3,837.3	-3.0	-698.0	698.0	4.37	4.37	0.00
4,200.0	66.52	269.75	3,880.6	-3.4	-788.1	788.1	4.37	4.37	0.00
4,300.0	70.90	269.75	3,916.9	-3.8	-881.3	881.3	4.37	4.37	0.00
4,400.0	75.27	269.75	3,946.0	-4.3	-976.9	977.0	4.37	4.37	0.00
4,500.0	79.65	269.75	3,967.7	-4.7	-1,074.5	1,074.5	4.37	4.37	0.00
4,600.0	84.02	269.75	3,981.9	-5.1	-1,173.5	1,173.5	4.37	4.37	0.00
4,700.0	88.39	269.75	3,988.5	-5.6	-1,273.2	1,273.3	4.37	4.37	0.00
4,736.7	90.00	269.75	3,989.0	-5.7	-1,310.0	1,310.0	4.37	4.37	0.00
<b>"HEAL" 90.00° @ 4737'MD - HEAL-200</b>									
4,800.0	90.00	269.75	3,989.0	-6.0	-1,373.2	1,373.3	0.00	0.00	0.00
4,900.0	90.00	269.75	3,989.0	-6.4	-1,473.2	1,473.3	0.00	0.00	0.00
5,000.0	90.00	269.75	3,989.0	-6.9	-1,573.2	1,573.3	0.00	0.00	0.00
5,100.0	90.00	269.75	3,989.0	-7.3	-1,673.2	1,673.3	0.00	0.00	0.00
5,200.0	90.00	269.75	3,989.0	-7.7	-1,773.2	1,773.3	0.00	0.00	0.00
5,300.0	90.00	269.75	3,989.0	-8.2	-1,873.2	1,873.3	0.00	0.00	0.00
5,400.0	90.00	269.75	3,989.0	-8.6	-1,973.2	1,973.3	0.00	0.00	0.00
5,500.0	90.00	269.75	3,989.0	-9.0	-2,073.2	2,073.3	0.00	0.00	0.00
5,600.0	90.00	269.75	3,989.0	-9.5	-2,173.2	2,173.3	0.00	0.00	0.00
5,700.0	90.00	269.75	3,989.0	-9.9	-2,273.2	2,273.3	0.00	0.00	0.00
5,796.7	90.00	269.75	3,989.0	-10.3	-2,370.0	2,370.0	0.00	0.00	0.00
<b>"TOE" 90.00° @ 5797'MD - TOE-200</b>									

### Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N-S (ft)	+E-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
HEAL-200	0.00	0.00	3,989.0	-5.7	-1,310.0	-11,253,415.76	81,174,921.03	0° 52' 22.965 S	1614° 28' 45.407 E
- plan hits target									
- Point									
TOE-200	0.00	0.00	3,989.0	-10.3	-2,370.0	-11,252,355.81	81,174,909.88	1° 34' 46.123 S	1614° 28' 41.377 E
- plan hits target									
- Point									

Database: EDM 2003.14 Single User Db  
Company: Energen Resources Corporation  
Project: Rio Arriba, NM  
Site: Sec.7 T30N-R4W  
Well: CARSON 200S  
Wellbore: Wellbore #1  
Design: Plan #1

Local Co-ordinate Reference: Well CARSON 200S  
TVD Reference: WELL @ 0.0ft (Original Well Elev)  
MD Reference: WELL @ 0.0ft (Original Well Elev)  
North Reference: True  
Survey Calculation Method: Minimum Curvature

**Plan Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N-S (ft)	+E-W (ft)	
2,679.0	2,679.0	0.0	0.0	KOP @ 2679'MD Build 4.37"/100'
4,736.7	3,989.0	-5.7	-1,310.0	"HEAL" 90.00" @ 4737'MD
5,796.7	3,989.0	-10.3	-2,370.0	"TOE" 90.00" @ 5797'MD

Submit 3 Copies To Appropriate District  
Office  
District I  
1625 N. French Dr., Hobbs, NM 87240  
District II  
1301 W. Grand Ave., Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources

Form C-103  
May 27, 2004

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

WELL API NO. 30-039-27589
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name: Carson
8. Well Number # 200S
9. OGRID Number 162928
10. Pool name or Wildcat Basin Fruitland Coal

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK OR A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other	2. Name of Operator Energen Resources Corporation
3. Address of Operator 2198 Bloomfield Highway, Farmington, NM 87401	4. Well Location Unit Letter <u>A</u> : <u>745</u> feet from the <u>North</u> line and <u>1345</u> feet from the <u>East</u> line Section <u>07</u> Township <u>30N</u> Range <u>04W</u> NMPM County <u>Rio Arriba</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 7233' GL	
Pit or Below-grade Tank Application <input checked="" type="checkbox"/> or Closure <input type="checkbox"/> Pit type <u>Drill</u> Depth to Groundwater <u>&gt;100'</u> Distance from nearest fresh water well <u>&gt;1000'</u> Distance from nearest surface water <u>&gt;250'</u> Pit Liner Thickness: <u>12</u> mil Below-Grade Tank: Volume _____ bbls; Construction Material _____	

12. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐  
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐  
PULL OR ALTER CASING ☐ MULTIPLE COMPLETION ☐

OTHER: Build drilling pit ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐  
COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐  
CASING TEST AND CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Energen Resources plans to build a lined pit according to "OCD Pit and Below-grade Tank Guidelines", as issued on November 1, 2004. Energen anticipates the submittal of a C-144 for closure of this pit in accordance with ELM and "OCD Pit and Below-grade Tank Guidelines".

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒ , a general permit ☐ or an (attached) alternative OCD-approved plan ☐

SIGNATURE Nathan Smith TITLE Drilling Engineer DATE 04/07/06  
E-mail address: nsmith@energen.com  
Telephone No. 505.325.6800

For State Use Only

APPROVED BY Denny Fitch TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 41 DATE APR 11 2006  
Conditions of Approval, if any:

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM 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.

5. Lease Serial No.

NMSF 079483A

6. If Indian, Allottee or Tribe Name

2006 JUN 12 AM 11 02

SUBMIT IN TRIPLICATE - Other instructions on reverse side

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

070 FARMINGTON NM

8. Well Name and No.

Carson # 2005

9. API Well No.

30-045-27589 30-039-27589

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

☐ Alter Casing

☐ Casing Repair

☐ Change Plans

☐ Convert to Injection

☐ Deepen

☐ Fracture Treat

☐ New Construction

☐ Plug and Abandon

☐ Plug Back

☐ Production (Start/Resume)

☐ Reclamation

☐ Recomplete

☐ Temporarily Abandon

☐ Water Disposal

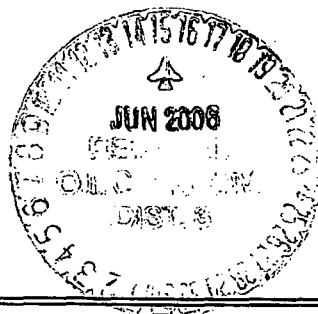
☐ Water Shut-Off

☐ Well Integrity

☒ Other spud

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.)

06/06/06 Spud @ 2:00 am on 06/06/06. Drill 12.25" hole to 250'. Ran 5 jts. 9.625" 32.3# H-40 ST&C casing, set @ 241'. RU Halliburton. Cement with 150 sks Class G, 1/4#/sk flooele, 2% CaCl2 (177 cu.ft.). Circulate 7 bbls cement to surface. Plug down @ 3:45 pm on 06/06/06. WOC. RD Halliburton. NU BOP. Test casing & BOP to 600 psi - ok.



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

Vicki Donaghey

Title

Regulatory Analyst

Date

06/09/06

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

JUN 13 2006

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

FARMINGTON FIELD OFFICE

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.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM 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.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

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)

745' ENL, 1345' FEL, Sec. 07, T30N, R04W, N.M.P.M.

NE/NE - A

5. Lease Serial No.

NMSF 079483A

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.

Carson # 200S

9. API Well No.

30-039-27589

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

- |   |   |  |   |
|---|---|--|---|
| <input type="checkbox"/> Acidize              | <input type="checkbox"/> Deepen           | <input type="checkbox"/> Production (Start/Resume) | <input type="checkbox"/> Water Shut-Off                     |
| <input type="checkbox"/> Alter Casing         | <input type="checkbox"/> Fracture Treat   | <input type="checkbox"/> Reclamation               | <input type="checkbox"/> Well Integrity                     |
| <input type="checkbox"/> Casing Repair        | <input type="checkbox"/> New Construction | <input type="checkbox"/> Recomplete                | <input checked="" type="checkbox"/> Other <u>set casing</u> |
| <input 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 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.)

07/05/06 Run 104 jts. 7" 23# J-55 casing, set @ 4622'. RU Halliburton. Cement with 650 sks 65/35 Class G poz, 6% gel, 2% CaCl2, 10#/sk gilsonite, 1/2#/sk floccle tailed by 125 sks Class G, 1/4#/sk floccle, 5#/sk gilsonite (1430 cu.ft.). Plug down @ 4:15 pm on 07/05/06. Circulate 63 bbls cement to surface. WOC. RD Halliburton. NU BOP. Test casing & BOP to 1200 psi - ok.



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

Vicki Donaghey

Title

Regulatory Analyst

Date

07/10/06

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date JUL 20 2006

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

FARMINGTON FIELD OFFICE

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.

NMOCB