

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED

JUN 22 2009

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER Farmington Field Office		5. Lease Serial No. USA SF 080245
1b. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input 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 2010 Afton Place Farmington, New Mexico 87401	3b. Phone No. (include area code) (505)325-6800	8. Lease Name and Well No. Federal 29-9-28 #4
4. Location of Well (Report location clearly and in accordance with any State requirements)* At surface 2111' FSL 1598' FWL At proposed prod. zone		9. API Well No. 3004534995
14. Distance in miles and direction from nearest town or post office* 15 miles East of Bloomfield, 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) 1598'		11. Sec., T., R., M., or Blk. and Survey or Area (K) Sec. 28, T29N, R09W NMPM
16. No. of Acres in lease 928.45 608.45	17. Spacing Unit dedicated to this well RCVD NOV 9 '09 W/2320 BLM DIST. DIV.	12. County or Parish San Juan
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 550'	19. Proposed Depth 2405'	13. State NM
20. BLM/BIA Bond No. on file NM2707 DIST. 3	21. Elevations (Show whether DF, KDB, RT, GL, etc.) 5823' GL	22. Approximate date work will start* JULY 2009
23. Estimated duration 15 days		

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must 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 must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the BLM              |

25. Signature 	Name (Printed/Typed) JASON KINCAID	Date 06/22/09
Title Drilling Engineer		
Approved by (Signature) 	Name (Printed/Typed) AFM	Date 11/6/09
Title FFO		



H<sub>2</sub>S POTENTIAL EXIST

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.

BLM'S APPROVAL OR ACTION ON THIS PAGE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

(Continued on page 2)

\*(Instructions on page 2)

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

NOV 13 2009

NOTIFY AZTEC OGD 24 HRS.  
PRIOR TO CASING & CEMENT

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

District I  
1626 N. French Dr., Hobbs, N.M. 88240

DISTRICT II  
1301 W. Grand Avenue, Artesia, NM 88210

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

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505 JUN 22 2005

Form C-102  
Revised October 12, 2005

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-045-34995		Pool Code 71629	Pool Name FC
Property Code 300450	Property Name FEDERAL 29-9-28		Well Number #4
GRID No. 162928	Operator Name ENERGEN RESOURCES		Elevation 5823

10 Surface Location

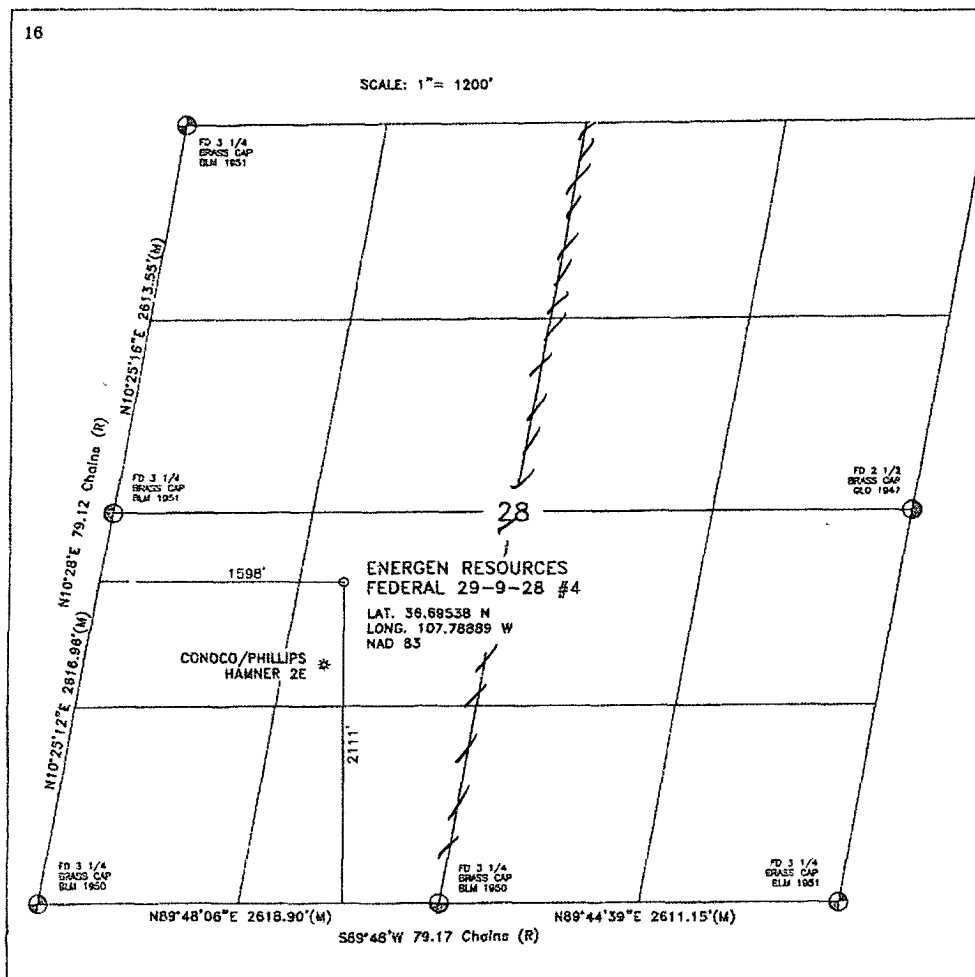
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	28	29-N	9-W		2111'	SOUTH	1598'	WEST	SAN JUAN

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
Dedicated Acres 320 1/2		Joint or Infill		Consolidation Code		Order No. A-13132			

No allowable will be assigned to this completion until all interest 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, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: Jason Kincaid Date: 6-22-05  
Printed Name

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.

Date of Survey: 03/31/04  
Signature and Seal of Professional Surveyor:  
Certificate Number: 8466

6/15/2009



### OPERATIONS PLAN

WELL NAME.....Federal 29-9-28 #4  
JOB TYPE.....Vertical Fruitland Coal  
DEPT.....Drilling and Completions  
PREPARED BY.....Jason Kincaid

### GENERAL INFORMATION

Surface Location	2111 FSL 1598 FWL
S-T-R	(K) Sec.28-T29N-R09W
County, State	San Juan, New Mexico
Elevations	5823' GL
Total Depth	2405' +/- (MD)
Formation Objective	Basin Fruitland Coal

### FORMATION TOPS

Nacimiento	Surface
Ojo Alamo Ss	1085'
Kirtland Sh	1240'
Fruitland Fm	1850'
Top Coal	2020'
Base Coal	2205'
Pictured Cliffs	2205'
<b>Total Depth</b>	<b>2405'</b>

### DRILLING

The 12 1/4" wellbore will be drilled with a fresh water mud system.  
The 7 7/8" 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.

#### Blowout Control Specifications:

A 2000 psi minimum double ram or annulus BOP stack will be used following nipple up of casing head. 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: 7-7/8" wellbore induction/gamma ray and density logs.  
Mudlogs: none  
Surveys: Surface and/or every 500' to TD.

6/15/2009



## CASING, TUBING & CASING EQUIPMENT

String	Start Depth	End Depth	Wellbore	Size	Wt	Grade
Surface	0	150	12-1/4"	8-5/8"	24.0 lb/ft	J-55 ST&C
Production	0	2405	7-7/8"	5-1/2"	15.5 lb/ft	J-55 LT&C
Tubing	0	2350		2 3/8"	4.7 lb/ft	J-55

### **Casing Equipment:**

**Surface Casing:** Depending on wellbore conditions, a Texas Pattern Guide Shoe on first joint with and insert float valve on top. Run standard bow spring centralizers as follows: every other joint from TD to surface. **3 minimum**

**Production 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 centralizers to optimize standoff.

## CEMENTING **125 ft<sup>3</sup>**

**Surface Casing:** 105 sks Std (class B) with 2.0 % CaCl<sub>2</sub> and ¼ #/sk Flocele (15.6 ppg, 1.18 ft<sup>3</sup>/sk ~~59 ft<sup>3</sup>~~ of slurry, 100% excess to circulate to surface). WOC 12 hours. Pressure test surface casing to 750 psi for 30 min. ✓

**Production 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 255 sks 65/35 with 6.0 % Bentonite, 2.0 % CaCl<sub>2</sub>, 10 #/sk Gilsonite, and ½ #/sk Flocele (12.3 ppg, 1.93 ft<sup>3</sup>/sk) and a tail of 150 sks of Class G cement with 5.0 #/sk Gilsonite, and ¼ #/sk Flocele (15.4ppg, 1.18 ft<sup>3</sup>/sk). (667 ft<sup>3</sup> of slurry to circulate to surface, 60% excess). ✓ **Test casing to 1500 psi for 30 min**

**Pump a 10 bbls water, 20 bbls gelled water, 5 bbls water spacer ahead of cement**

**Cement volumes are subject to change if caliper logs are run and dictate otherwise. ✓**

## OTHER INFORMATION

- 1) This well will be cased and the Basin Fruitland Coal fracture stimulated.
- 2) If lost circulation is encountered, sufficient LCM will be added to the mud system to maintain well control. The production 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. Anticipated pressure is 300 psi. ✓
- 4) No abnormal temperatures or pressures are anticipated.
- 5) This gas is dedicated.



## **Multi-Point Surface Use Plan**

Submitted in Partial for the Fulfillment of the Requirements for APD  
Approval According to 43 CFR 3160 Order #1

**Well Name: Federal 29-9-28 #4**

**Legal Description: Sec 28, T29N, R09W – 2111 FSL, 1598 FWL**

This document involves the construction (up to and including maintaining existing roadways and new access construction), drilling operation, surface use while producing, and reclamation of said well stated above. The wellpad will be constructed and the well drilled according to any further stipulations as deemed necessary by the governing surface regulatory agency. Production facilities will be set according to the conditions of approval set forth by the governing surface regulatory agency.

### **1. Existing and New Roads**

Please refer to the surveyors map which shows the existing roads. New roads which will be required will be shown on cut and fill diagrams provided by the surveying company. An access road survey has been included to show proximity of existing roads, in this case SJCR 4900. All existing and new roads will be properly maintained during the duration of this project.

### **2. Planned Access Road**

The required access road is shown on the Access Road Survey. The gradient, shoulder, crowning and other design elements will meet those specified by the responsible government agency for the road from the existing access to the wellpad. No additional turnarounds or turnouts will be required. Upon completion of the project, the access road from the existing road to the wellpad will be adequately maintained to control soil erosion. No new access will be required.

### **3. Location of Existing Nearby Wells**

The Hanner #2E is the nearest well in proximity.

### **4. Location of Existing and/or Proposed Facilities if Well is Productive**

On the Well Pad - Refer to anticipated facilities layout schematic.

Off the Well Pad - Anticipated facilities off the well pad will be applied for as required.

### **5. Location and Type of Water Supply**

Water for the proposed project will be trucked and obtained from the San Juan River.

### **6. Source of Construction Materials**

Materials used will be cut and fill of existing ground and native materials.

### **7. Methods of Handling Waste Materials**

All garbage and trash materials will be stored in a trash basket and removed from the site for proper disposal. A portable toilet will be provided for human waste and serviced in a proper manner. The drill cuttings, fluids, and completion fluids would be placed in a closed loop system. A reserve pit will not be utilized. If earthen pits are located in natural drainage, diversion ditches will be constructed to prevent run off into pits. Generation of hazardous waste is not anticipated. Federal regulations will be adhered to regarding handling and disposal of such waste if so generated.

**8. Well site Layout**

Refer to the location diagram and to the wellsite cut and fill diagram.

**9. Plans for Restoration of the Surface**

After completion of the proposed project, the location will be cleaned and leveled. The location will be left in such a condition that will enable reseeding operations to be carried out. Seed mixture as designated by the responsible government agency will be used. The re-seeding operations will be performed during the time period set forth by the responsible governmental agency. The permanent location, facilities will be painted as designated by the responsible governmental agency.

**10. Surface Ownership**

Bureau of Land Management

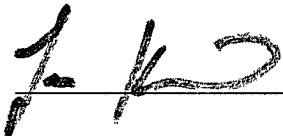
**11. Other Information**

Environmental stipulations as outlined by the responsible government agency will be adhered to. Refer to the archaeological report for a description of the topography, flora, fauna, soil characteristics, dwellings, historical and cultural sites.

**Operator Certification**

Energen Resources  
2010 Afton Place  
Farmington, New Mexico 87401  
(505) 325-6800.

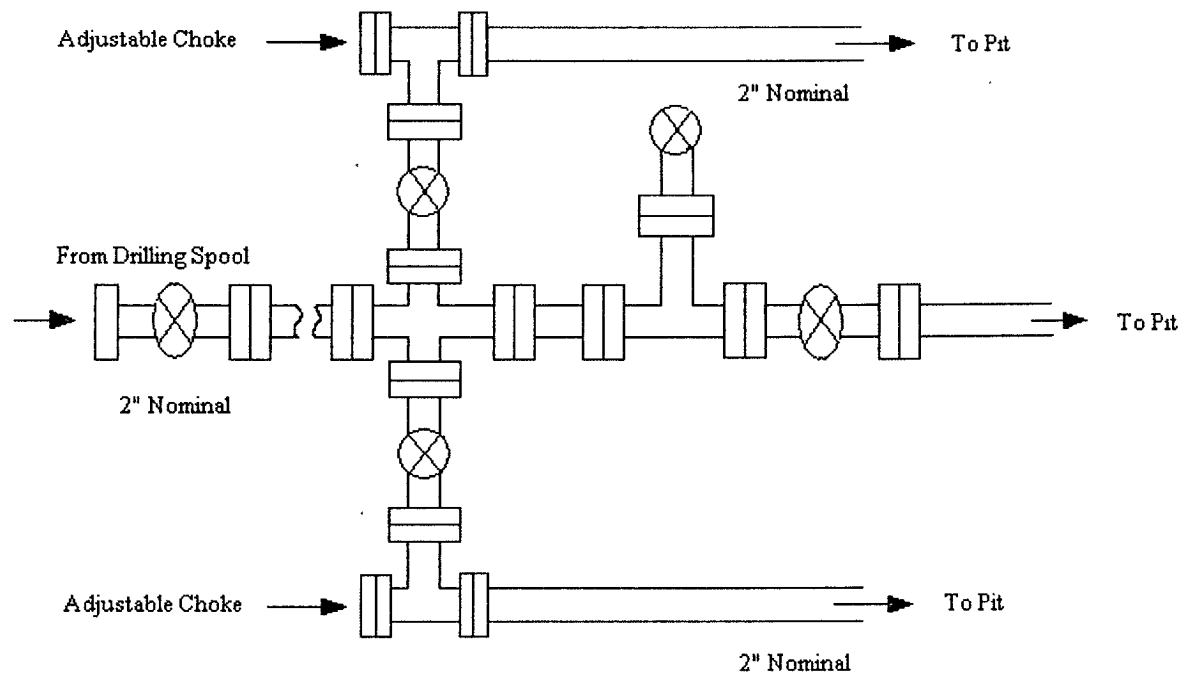
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan, are to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Energen Resources Corporation and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

A handwritten signature in black ink, appearing to read 'J. Kincaid', is written over a horizontal line.

Jason Kincaid – Drilling Engineer, in behalf of Gary Brink, General Manager San Juan Basin

## Energen Resources Corporation

Typical 2000 psi Choke Manifold Configuration



Choke manifold installed from surface to TD

## Energen Resources Corporation

### Typical BOP Configuration for Gas Drilling

