

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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APR 02 2010

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

Bureau of Land Management
Farmington Field Office

1a. Type of Work ☒ DRILL ☐ REENTER

1b. Type of Well ☐ Oil Well ☒ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone

2. Name of Operator
Energen Resources Corporation

3a. Address 2010 Afton Place Farmington, New Mexico 87401
3b. Phone No. (include area code) (505)325-6800

4. Location of Well (Report location clearly and in accordance with any State requirements)*

At surface 1211' FNL 920' FEL

At proposed prod. zone

14. Distance in miles and direction from nearest town or post office*
10 miles south of Farmington, NM

15. Distance from proposed* location to nearest property or lease line, ft. 1820'
(Also to nearest drg. unit line, if any)

16. No. of Acres in lease
1200.00320

17. Spacing Unit dedicated to this well
320 E/2

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 2000'

19. Proposed Depth
1818'

20. BLM/BIA Bond No. on file

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
6256' GL



H₂S POTENTIAL EXIST

22. Approximate date work will start*
JUNE 2010

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.
2. A Drilling Plan.
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).

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be required by the BLM

RCVD MAR 17 '11

OIL CONS. DIV.

DIST 3

25. Signature

Stephen Byers

Name (Printed/Typed)

STEPHEN BYERS

Date

04/01/2010

Title

Drilling Engineer

Approved by (Signature)

[Signature]

Name (Printed/Typed)

Date

3/16/11

Title

AFM

Office

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.

(Continued on page 2)

*(Instructions on page 2)

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

MAR 30 2011

NMOCD

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

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

District I
1825 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. APR 02 2010

Santa Fe, NM 87505

Bureau of Land Management
Farmington Field Office

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

¹ API Number 30-045-35132	² Pool Code 71629	³ Pool Name FC
⁴ Property Code 38546	⁵ Property Name WESTERN	⁶ Well Number 200
⁷ OGRID No. 162928	⁸ Operator Name ENERGEN RESOURCES	⁹ Elevation 6256'

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
A	8	26-N	11-W		1211'	NORTH	920'	EAST	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
¹² Dedicated Acres 320 E/2	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.						

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 FD 2 1/2 GLO BC 1930	N86°59'35"W 2684.37(M) N87°02'W 40.69 Chains (R)	SEC COR CALC BY SINGLE PROPORTION	N89°22'39"W 2628.92(M) N89°25'W 39.85 Chains (R)	FD 2 1/2 GLO BC 1930
1211'				
920'				
ENERGEN RESOURCES WESTERN 200 LAT. 36.50617 N LONG. 108.02103 W NAD 83				
8				
S1°09'37"W 5242.53' (M) N1°09'W 79.42 Chains (R)				
FD 2 1/2 GLO BC 1930				

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.

Stephen Byers 4-1-10
Signature Date
Stephen Byers
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
Signature and Seal of Professional Surveyor:

WILLIAM E. MAHNKE II
Certificate Number 8466

4/12/2010



OPERATIONS PLAN

WELL NAME.....Western #200
JOB TYPE.....Vertical Fruitland Coal
DEPT.....Drilling and Completions
PREPARED BY.....Stephen Byers

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GENERAL INFORMATION

APR 12 2010

Surface Location	1211 FNL 920 FEL	Bureau of Land Management
S-T-R	(A) Sec.8-T26N-R11W	Farmington Field Office
County, State	San Juan, New Mexico	
Elevations	6256' GL	
Total Depth	1818' +/- (MD)	
Formation Objective	Basin Fruitland Coal	

FORMATION TOPS

Ojo Alamo Ss	528'
Kirtland Sh	658'
Fruitland Fm	1343'
Top Coal	1403'
Base Coal	1618'
Pictured Cliffs	1618'
Total Depth	1818'

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. **Pressure test BOP to 250 psi for 15 min and 2000 psi for 15 min.**

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.

4/12/2010



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	1818	7-7/8"	5-1/2"	15.5 lb/ft	J-55 LT&C
Tubing	0	1818		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.

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. Turbolizers are to be placed in the base of the Ojo Alamo formation.

CEMENTING

Surface Casing: 105 sks Std (class B) with 2.0 % CaCl_2 and 1/4 #/sk Flocele (15.6 ppg, 1.18 ft^3/sk 124 ft^3 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 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 146 sks 65/35 with 6.0 % Bentonite, 2.0 % CaCl_2 , 10 #/sk Gilsonite, and 1/2 #/sk Flocele (12.3 ppg, 1.93 ft^3/sk) and a tail of 150 sks of Class G cement with 5.0 #/sk Gilsonite, and 1/4 #/sk Flocele (15.4ppg, 1.18 ft^3/sk). (459 ft^3 of slurry to circulate to surface, 60% excess). WOC 12hours. **Test casing to 1500 psi for 30 min.**

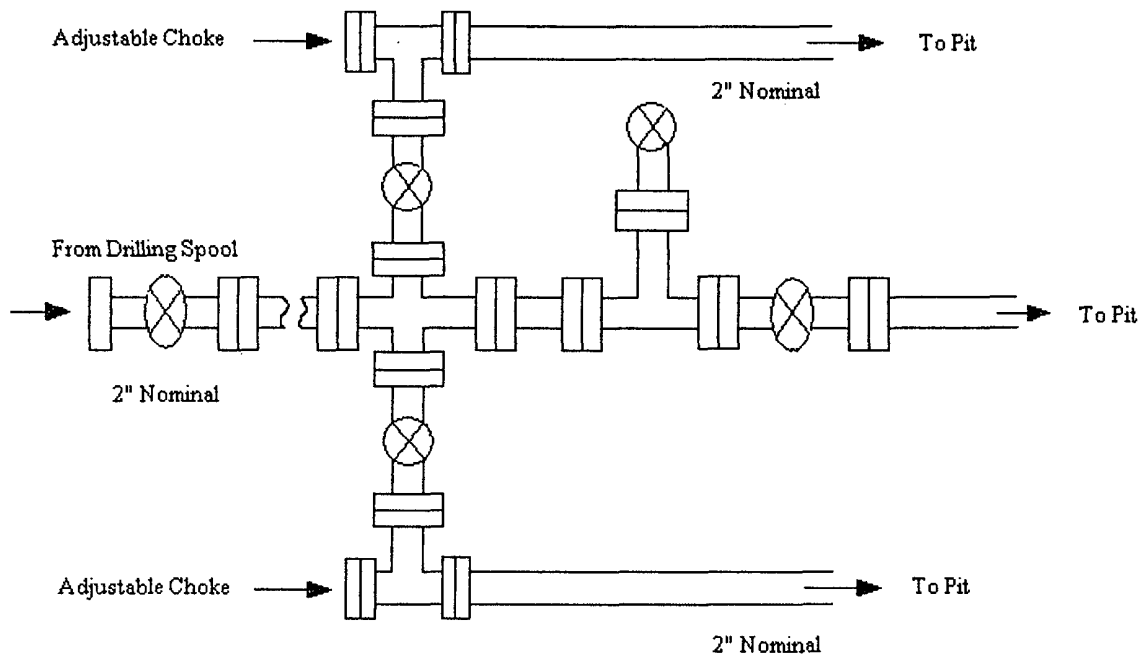
Pump a 10 bbls water, 20 bbls gelled water, 5 bbls water spacer ahead of cement

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.

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

