

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires July 31, 2010

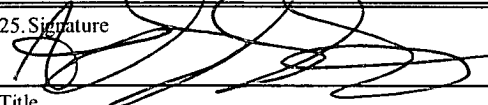
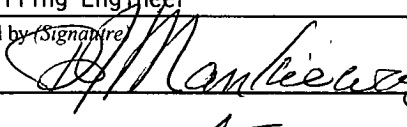
RECEIVED

APPLICATION FOR PERMIT TO DRILL OR REENTER FEB 09 2011

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. USA SF 077972	
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 Zones		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		8. Lease Name and Well No. Richardson #102S	
3b. Phone No. (include area code) (505)325-6800		9. API Well No. 30-045-35242	
4. Location of Well (Report location clearly and in accordance with any State requirements)* At surface (N) Sec. 11-T27N-R13W ; 1.282' FSL, 1.386' FWL At proposed prod. zone		10. Field and Pool, or Exploratory Basin Fruitland Coal	
14. Distance in miles and direction from nearest town or post office* 5 miles south of Farmington, NM		11. Sec., T., R., M., or Blk. and Survey or Area Sec. 11-T27N-R13W	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) 1.282'		12. County or Parish San Juan	
16. No. of Acres in lease 2278.2		13. State NM	
17. Spacing Unit dedicated to this well 320 acres (S/2)			
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 262'		20. BLM/BIA Bond No. on file NM2707	
19. Proposed Depth 1,529' MD			
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 5,922' GL		22. Estimated duration 15 days	
22. Approximate date work will start* 06/01/2011			
23. Estimated duration 15 days			
24. Attachments		DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".	

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

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

25. Signature 	Name (Printed/Typed) Andrew Soto	Date 1/26/11
Title Drilling Engineer		
Approved by (Signature) 	Name (Printed/Typed) AFM	Date 1/16/11
Title AFM	Office PFO	

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)

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT

*(Instructions on page 2)

RCVD NOV 23 '11
OIL CONS. DIV.

DEC 05 2011

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

A COMPLETE C-144 MUST BE SUBMITTED TO AND APPROVED BY THE NMOCD FOR: A PIT, CLOSED LOOP SYSTEM, BELOW GRADE TANK, OR PROPOSED ALTERNATIVE METHOD, PURSUANT TO NMOCD PART 19.15.17, PRIOR TO THE USE OR CONSTRUCTION OF THE ABOVE APPLICATIONS.

NMOCD

District I
1625 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

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 30-045-35242	² Pool Code 71629	³ Pool Name FC
⁴ Property Code 21370	⁵ Property Name RICHARDSON	⁶ Well Number #102s
⁷ OGRID No. 162928	⁸ Operator Name ENERGEN RESOURCES	⁹ Elevation 5922'

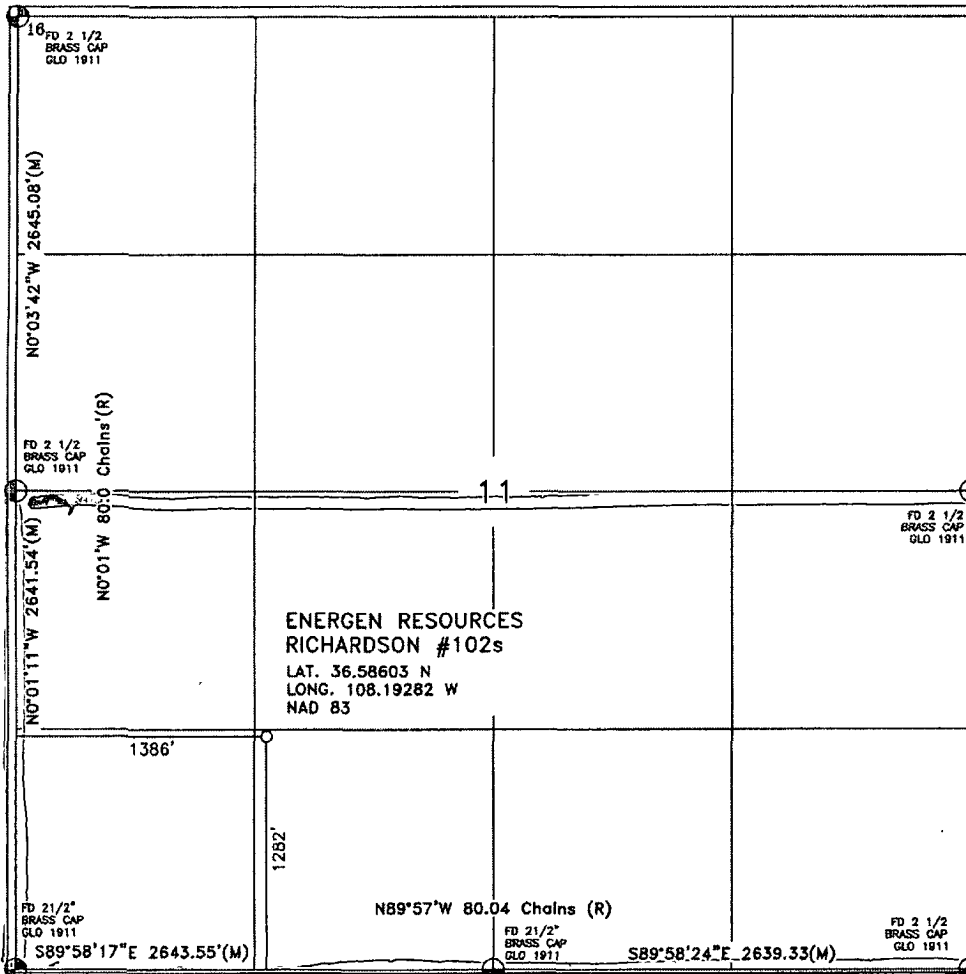
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	11	27-N	13-W		1282'	SOUTH	1386'	WEST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

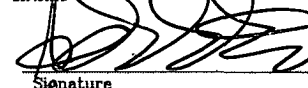
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	11	27-N	13-W		1282'	SOUTH	1386'	WEST	SAN JUAN
¹² Dedicated Acres 320 5/2	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.	RCVD DEC 1 '11 OIL CONS. DIV. DIST. 3					

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.



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 Date 11-25-11
Andrew Soto
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 6/25/09
Signature and Seal of Professional Surveyor:


WILLIAM E. MAHNKE II
Certificate Number 8466

1/31/2011



OPERATIONS PLAN

WELL NAME.....Richardson #102S
JOB TYPE.....Vertical Fruitland Coal
DEPT.....Drilling and Completions
PREPARED BY.....Andrew Soto

GENERAL INFORMATION

Surface Location	1,282 FSL 1,386 FWL
S-T-R	(N) Sec.11-T27N-R13W
County, State	San Juan, New Mexico
Elevations	5,922' GL
Total Depth	1,529' +/- (MD)
Formation Objective	Basin Fruitland Coal

FORMATION TOPS

Ojo Alamo Ss	54'
Kirtland Sh	184'
Fruitland Fm	1,054'
Top Coal	1,284'
Base Coal	1,329'
Pictured Cliffs	1,349'
Total Depth	1,529'

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 2,000 psi minimum double ram or annulus BOP stack will be used following nipple up of casing head. A 2" nominal, 2,000 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 2,000 psi for 15 min.**

Logging Program:

Open hole logs: 7 7/8" wellbore SLB Standard Platform Express
Mudlogs: none
Surveys: Surface and/or every 350' to TD.

1/31/2011

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	1,529	7 7/8"	5 1/2"	15.5 lb/ft	J-55 LT&C
Tubing	0	1,529		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.

WELLHEAD

9 5/8" x 5 1/2" weld/slip on casing head. 5 1/2" x 2 3/8" 2000 psi weld/slip on tubing head.

CEMENTING

Surface Casing: 105 sks Type V with 2.0 % CaCl₂ and 1/4 #/sk Flocele (15.6 ppg, 1.18 ft³/sk 124 ft³ 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 volume of mud and reduce funnel viscosity to minimum to aid in hole cleanout. Depending on wellbore conditions, cement may consist of 196 sks PRB II with 5.0 #/sk Gilsonite, and 1/4 #/sk Flocele (12.3 ppg, 2.24 ft³/sk) and a tail of 50 sks of PRB II cement with 5.0 #/sk Gilsonite, and 1/4 #/sk Flocele (13.5ppg, 1.81 ft³/sk). (530 ft³ of slurry, circulate 100% excess to surface). The top of tail is designed to 1,007' FS.

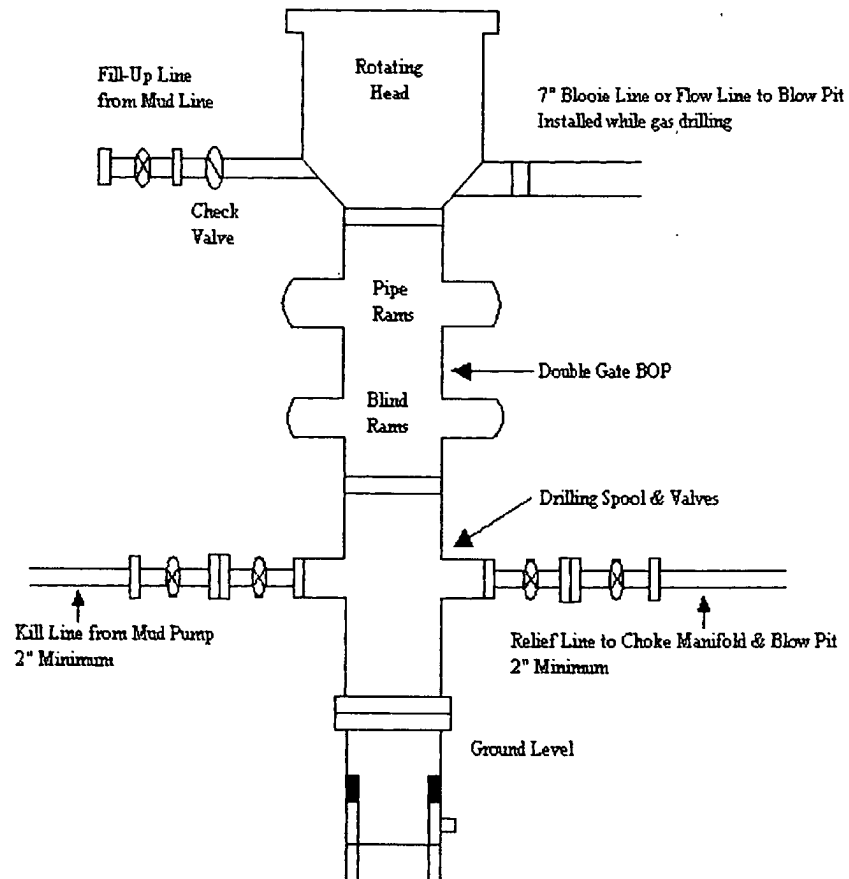
Cement volumes are subject to change if caliper logs are run and dictate otherwise.

OTHER INFORMATION

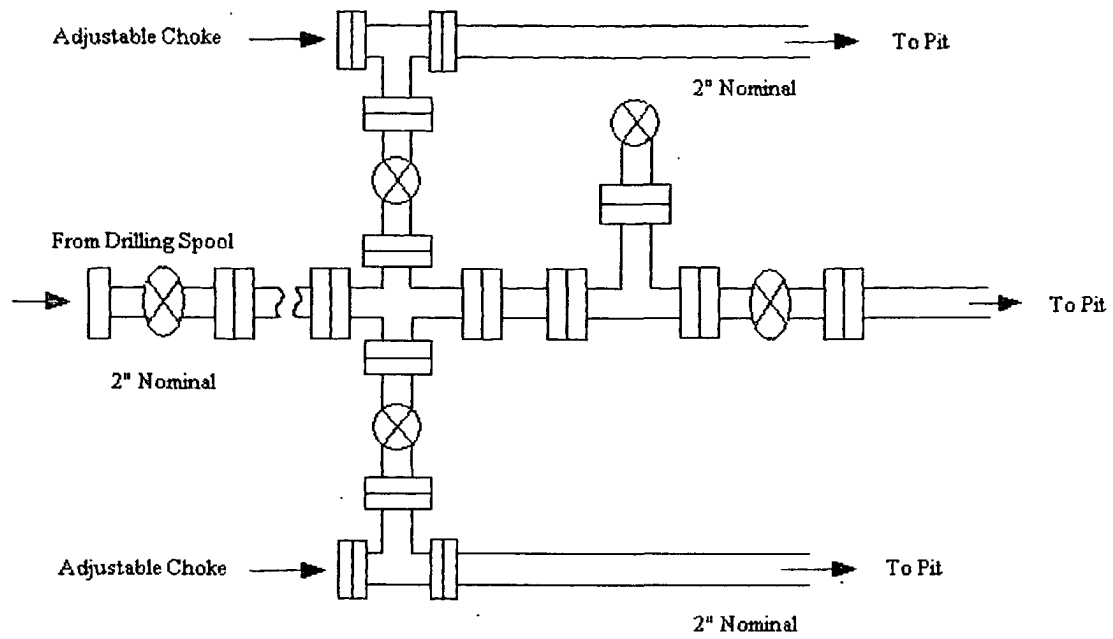
- 1) This well will be cased and the Basin Fruitland Coal fracture stimulated.
- 2) If lost circulation is encountered, sufficient LCM will be added to the mud system to maintain well control. The production string may need to be cemented in multiple stages with a slurry design deviated from that listed 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 BOP Configuration for Gas Drilling



Energen Resources Corporation
Typical 2000 psi Choke Manifold Configuration



Choke manifold installed from surface to TD