

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires March 31, 2007


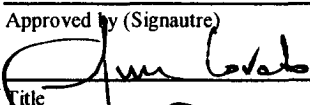
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. SF 078200B
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 2198 Bloomfield Highway Farmington, New Mexico 87401	3b. Phone No. (include area code) (505) 325-6800	8. Lease Name and Well No. Riddle B #224S
4. Location of Well (Report location clearly and in accordance with any State requirements)* At surface 0685' fnl, 1510' fel At proposed prod. zone		9. API Well No. 30-045-32901
14. Distance in miles and direction from nearest town or post office* Approximately 7.3 miles south east of Aztec		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) 0685'	16. No. of Acres in lease 949.76	11. Sec., T., R., M., or Blk. and Survey or Area B S27, T30N, R10W
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. Approx. 500'	19. Proposed Depth 2974'	12. County or Parish San Juan
21. Elevations (Show whether DF, KDB, RT, GL, etc.) GL 6202'	22. Approximate date work will start* 04/01/05	13. State NM
23. Estimated duration 14 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) Nathan Smith	Date 2/8/05
Title Drilling Engineer		
Approved by (Signature) 	Name (Printed/Typed) Acting Field Manager - Minerals	Date 2/8/05
Title Acting Field Manager - Minerals		

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 page 2)

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

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

NMOCD

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

2005 FEB 16 PM 12 26' ☐ AMENDED REPORT

RECEIVED

WELL LOCATION AND ACRES DEDICATION PLAT

*API Number 30-045-32901	*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 21373	*Property Name RIDDLE B	*Well Number 2245
*GRID No. 162928	*Operator Name ENERGEN RESOURCES CORPORATION	*Elevation 6202'

¹⁰ Surface Location

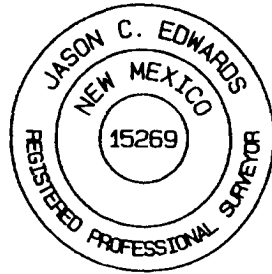
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	27	30N	10W		685	NORTH	1510	EAST	SAN JUAN

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 318.22 Acres - (E/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	5248.32'				17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief Signature Doug Thomas Printed Name Drilling Superintendant Title Date
	LOT 4	LOT 3	LOT 2	LOT 1	
	LOT 5	LOT 6	LOT 7	LOT 8	
5278.68'	LOT 12	LOT 11	LOT 10	LOT 9	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 Survey Date: DECEMBER 7, 2004 Signature and Seal of Professional Surveyor  JASON C. EDWARDS Certificate Number 15269
	LOT 13	LOT 14	LOT 15	LOT 16	
	2607.00'	2624.16'			

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

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

Form C-103
May 27, 2004

WELL API NO. <u>30-045-32901</u>
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. <u>SF 078200B</u>
7. Lease Name or Unit Agreement Name: <u>Riddle B</u>
8. Well Number <u>224S</u>
9. OGRID Number <u>162928</u>
10. Pool name or Wildcat <u>Basin Fruitland Coal</u>

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO 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	11. Elevation (Show whether DR, RKB, RT, GR, etc.) <u>6202' GL</u>
2. Name of Operator <u>Energen Resources Corporation</u>	
3. Address of Operator <u>2198 Bloomfield Highway, Farmington, NM 87401</u>	
4. Well Location Unit Letter <u>B</u> : <u>685</u> feet from the <u>North</u> line and <u>1510</u> feet from the <u>East</u> line Section <u>27</u> Township <u>30N</u> Range <u>10W</u> NMPM County <u>San Juan</u>	
Pit or Below-grade Tank Application <input checked="" type="checkbox"/> or Closure <input type="checkbox"/> Pit type <u>Drill</u> Depth to Groundwater <u>>100'</u> Distance from nearest fresh water well <u>>1000'</u> Distance from nearest surface water <u>>200'</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 NMOC guidelines ☒ , a general permit ☐ or an (attached) alternative OCD-approved plan ☐

SIGNATURE Nathan Smith TITLE Drilling Engineer DATE 2/15/05

Type or print name Nathan Smith

E-mail address: nsmith@energen.com

Telephone No. 505.325.6800

For State Use Only

APPROVED BY [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 30 DATE DEC 02 2005

Conditions of Approval, if any:

Operations Plan

January 27, 2005

Riddle B #224S

General Information

Location	0685' fml, 1510' fwl nwne S27, T30N, R10W San Juan County, New Mexico
Elevations	6202' GL
Total Depth	2974' (MD)
Formation Objective	Basin Fruitland Coal

Formation Tops

San Jose	Surface
Nacimiento	424'
Ojo Alamo Ss	1459'
Kirtland Sh	1594'
Fruitland Fm	2474'
Top Coal	2524'
Bottom Coal	2774'
Pictured Cliffs Ss	2774'
Total Depth	2974'

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 (figure 1) 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: Induction/Gamma Ray and Density Logs

Coring: None

Natural Gauges: None

Tubulars

Casing, Tubing, & Casing Equipment:

String	Interval	Wellbore	Casing	Csg Wt	Grade
Surface	0'-300'	12 1/4"	8 5/8"	24.0 ppf	J-55 ST&C
Production	300'-2974'	7 7/8"	5 1/2"	15.5 ppf	J-55 LT&C
Tubing	0'-2900'		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.

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. Two turbolating centralizers at the base of the Ojo Alamo are recommended.

Wellhead

8 5/8" 2000 x 5 1/2" Larkin casing head. 5 1/2" 2000 x 2" tubing head.

Cementing

Surface Casing: 225 sks Std (class B) with 2.0 % CaCl₂ and 1/4 #/sk Flocele (15.6 ppg, 1.18 ft³/sk 247 ft³ of slurry, 100% excess to circulate to surface). WOC 12 hours. Pressure test surface casing to 1000 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 440 sks 65/35 with 6.0 % Bentonite, 2.0 % CaCl₂, 10 #/sk Gilsonite, and 1/2 #/sk Flocele (12.3 ppg, 1.96 ft³/sk) and a tail of 145 sks of Standard (Class B) cement with 5.0 #/sk Gilsonite, and 1/4 #/sk Flocele (15.2ppg, 1.24 ft³/sk). (1030.8 ft³ of slurry, 100 % excess to circulate to surface).

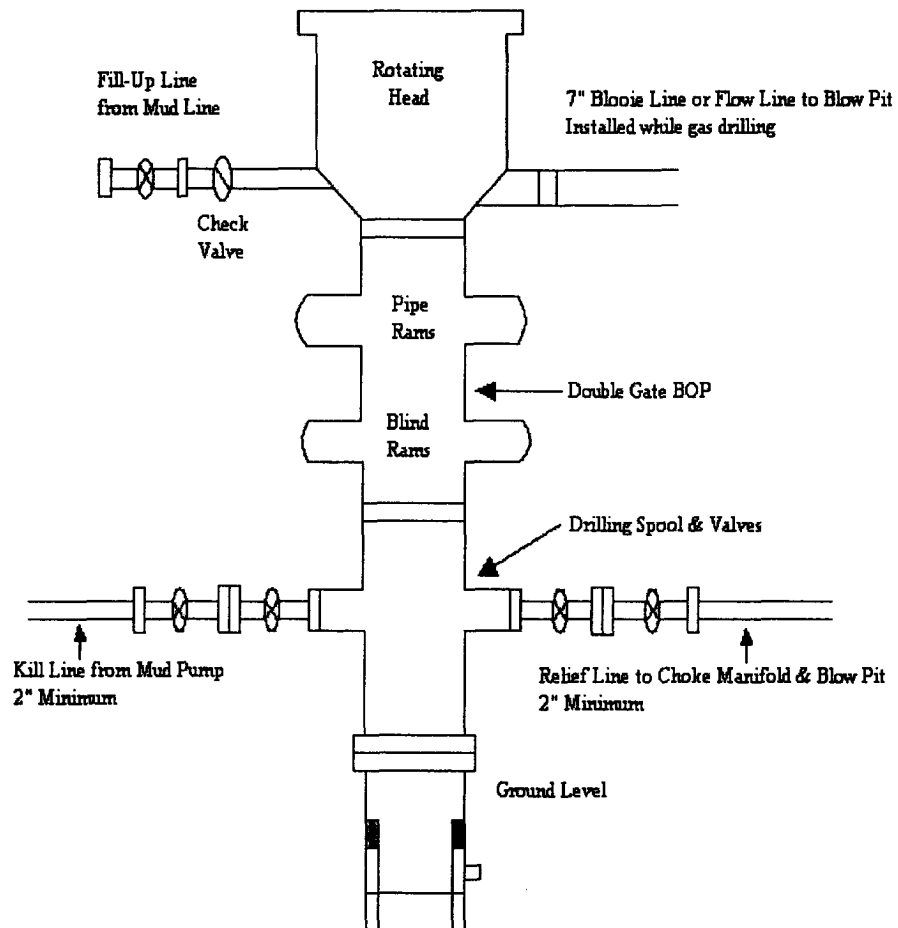
Pump 30 sks of flyash scavenger spacer consisting of 15.0 % Benonite and 0.15 % HR-5 ahead of cement

Other Information

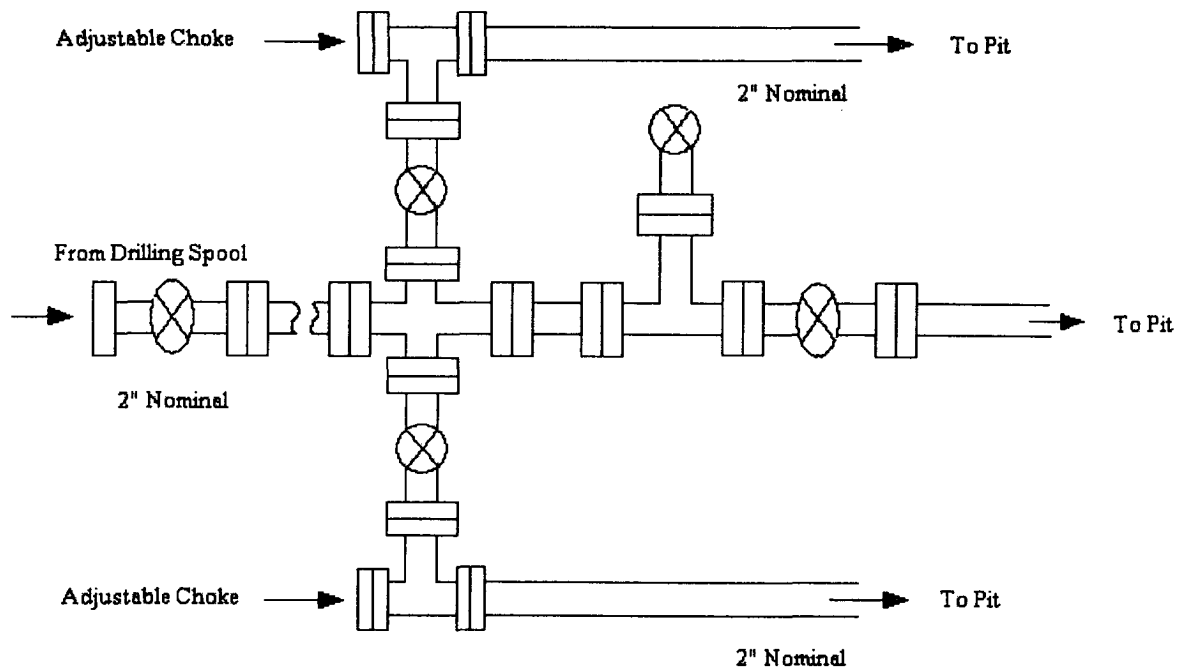
- 1) This well will be cased and the Basin Fruitland Coal fracture stimulated.
- 2) If lost circulation is encountered, sufficient LCM will be added to the mud system to maintain well control. The production string may need to be cemented in multiple stages with a slurry design deviated from that listed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

ENERGEN RESOURCES CORPORATION RIDDLE B #224S
685' FNL & 1510' FEL, SECTION 27, T30N, R10W, NMPM
SAN JUAN COUNTY, NEW MEXICO GROUND ELEVATION: 6202'

LATITUDE: 36°47'19"
 LONGITUDE: 107°52'03"
 DATUM: NAD1927

