

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. NM-4461	
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. 32567	
3a. Address 2198 Bloomfield Highway Farmington, New Mexico 87401		8. Lease Name and Well No. Elk Horn 100S	
3b. Phone No. (include area code) (505) 325-6800		9. API Well No. 3003927449	
4. Location of Well (Report location clearly and in accordance with any State requirements) At surface 1400' FNL, 685' FWL - SWNW 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* 16 miles northeast of Gobernador		11. Sec., T., R., M., or Blk. and Survey or Area Sec. 29, T32N, R05W, N.M.P.M.	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) 685'		12. County or Parish Rio Arriba	
16. No. of Acres in lease 640.0		13. State NM	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 2500'		17. Spacing Unit dedicated to this well 320/W2	
19. Proposed Depth 3696'		20. BLM/BIA Bond No. on file	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6876' GL		22. Approximate date work will start* August 2003	
		23. Estimated duration 5 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:

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| 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) Don Graham	Date 5/30/03
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Title

Production Superintendent

Approved by (Signature) Original Signed: Stephen Mason	Name (Printed/Typed)	Date AUG 08 2003
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Title

Office

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 3165.3
and appeal pursuant to 43 CFR 3165.4

NMOC

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

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-27449		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 32567	*Property Name ELK HORN		*Well Number 100S
*OGRID No. 162928	*Operator Name ENERGEN RESOURCES CORPORATION		*Elevation 6876'

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
E	29	32N	5W		1400	NORTH	685	WEST	RIO ARriba

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 320.0 Acres - (W/2)					¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ 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

	<p>¹⁷ OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <p><i>Don Graham</i> Signature Don Graham Printed Name Production Superintendant Title 6-2-03 Date</p>
	<p>¹⁸ SURVEYOR CERTIFICATION</p> <p>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.</p> <p>Survey Date: APRIL 17, 2003</p> <p>Signature and Seal of Professional Surveyor</p> <p> JASON C. EDWARDS Certificate Number 15269</p>

OPERATIONS PLAN

WELL NAME: Elk Horn 100S

LOCATION: 1400' FNL, 685' FWL, Section 29, T32N, R5W, Rio Arriba County, NM

FIELD: Basin Fruitland Coal

ELEVATION: 6876' GL

FORMATION TOPS:

Surface	San Jose
Nacimiento	1596
Ojo Alamo	2886
Kirtland	3011
Fruitland	3431

Total Depth 3696

LOGGING PROGRAM:

Open Hole Logs:

Surface to intermediate: None

Inter TD to total depth: None

Mud Logs: Intermediate to total depth

Coring: None

Natural Gauges: Every 500' from intermediate TD to total depth

MUD PROGRAM: Fresh water low solids mud from surface to intermediate TD (9.0 PPG).

Air/mist from intermediate casing point to total depth.

CASING PROGRAM:

<u>HOLE SIZE</u>	<u>DEPTH</u>	<u>CSG SIZE</u>	<u>WT.</u>	<u>GRADE</u>
12 ¼"	200'	9 5/8"	32.3#	H-40 – ST&C
8 ¾"	3506	7"	20#	J-55 – ST&C
6 ¼"	3406'-3696'	5 ½"	15.5#	J-55 – LT&C

TUBING PROGRAM:

3500'	2 3/8"	4.7#	J-55
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WELLHEAD: 11" 3000 x 9 5/8" casing head. 11" 3000 x 7 1/16" 3000 xmas tree.

BOP SPECIFICATIONS:

An 11" 2000 psi minimum double gate BOP stack (Figure 1) 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 be used. An upper Kelly Cock valve with handle available and drill string valve to fit each drill string will be available on the rig floor during drilling operations.

CEMENTING:

9 5/8" surface casing - cement with 110 sks Class B Cement with 1/4" flocele/sk and 2% calcium chloride (130 cu. ft. of slurry, 100% excess to circulate to surface). WOC 12 hrs. Test casing to 600# for 30 minutes.

Texas Pattern Guide Shoe on bottom. 3 bow type centralizers spaced throughout the string.

7" intermediate casing - cement with 445 sks 65/35 Class B Poz with 6% gel, 2% calcium chloride, 10% gilsonite, and 1/4# flocele/sk. Tail with 100 sks Class B w/2% calcium chloride, 10% gilsonite and 1/4# flocele/sk. (1001 cu. ft. of slurry, 90% excess to circulate to surface). WOC 12 hrs. If cement does not circulate, run temperature survey in 8 hrs. to determine TOC. Test casing to 1200 psi for 30 minutes.

Cement nose guide shoe on bottom with a self-fill insert float valve on top of shoe joint. 10 bow spring centralizers spaced every 2nd joint off bottom. Two turbolating centralizers at the base of the Ojo Alamo.

5 1/2" Liner - NO CEMENT

OTHER INFORMATION:

- 1) The Basin Fruitland Coal will be completed.
- 2) No abnormal temperatures or pressures are anticipated.
- 3) If lost circulation is encountered sufficient LCM will be added to the mud system to maintain well control.
- 4) This gas is dedicated.
- 5) Anticipated pore pressure for the Fruitland is 700 psi.